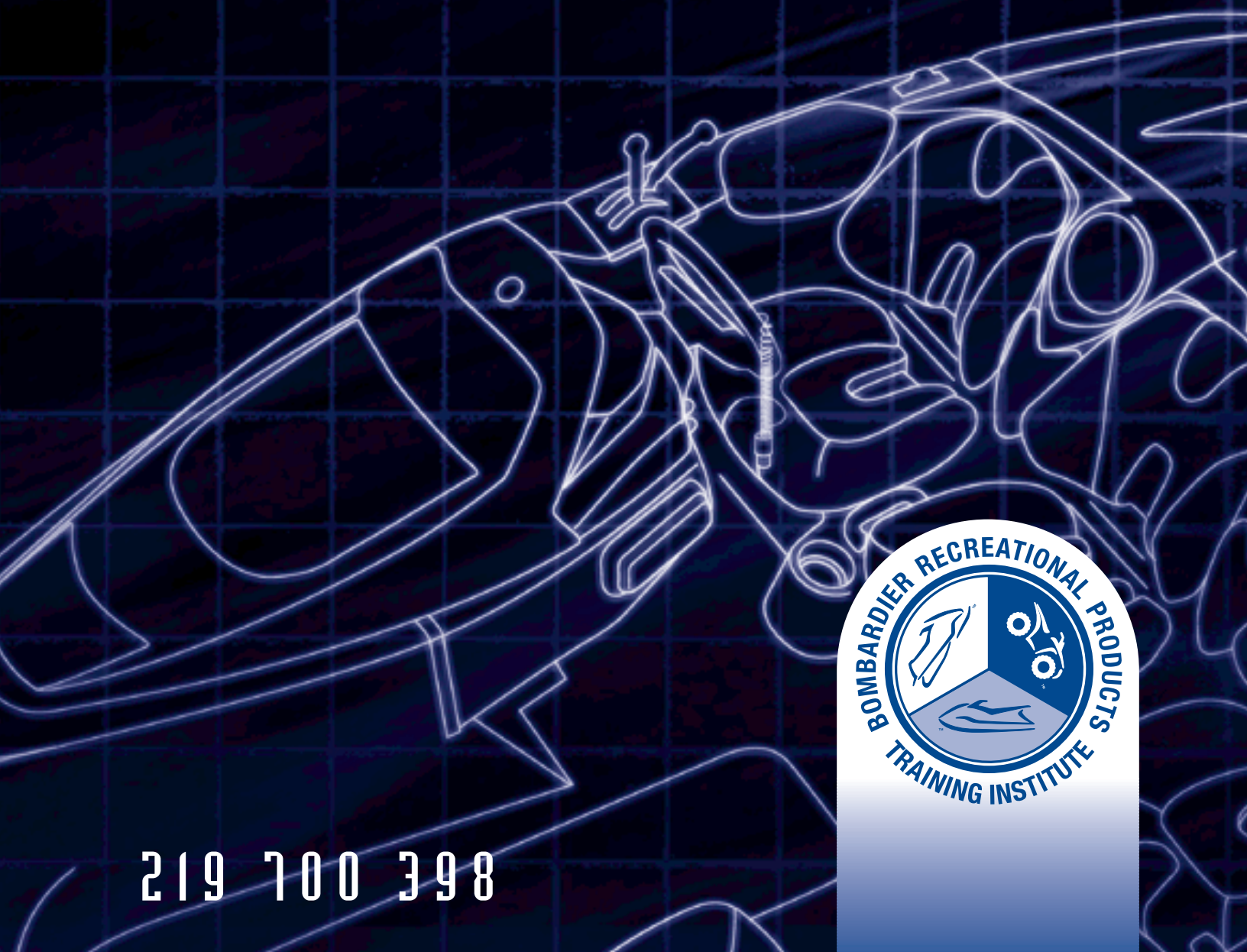
SEA-DOO®
Sport Boats

BRP

TECHNICAL UPDATE BOOK
2004



BOMBARDIER RECREATIONAL PRODUCTS
TRAINING INSTITUTE

219 700 398

Index

2004 Technical Update Book

Bombardier Recreational Products Inc. is proud to introduce the 2004 BOMBARDIER SPORT BOAT Technical Update Book.

Again this year, you are given the opportunity to test on the B.R.P.T.I. web site:

www.brpti.brp.com

STEP BY STEP TO DO THE EXAM:

Go to the the B.R.P.T.I. web site: **www.brpti.brp.com**

If you are **not registered** click on:
"New to B.R.P.T.I. CLICK HERE …"

If **you are already registered to B.R.P.T.I.** you need to enroll to:
2004 Sport Boat Technical Update.

1. Use your B.R.P.T.I. login name and password to enter the B.R.P.T.I. web site.
2. In the "Favorites" box, click on "Courses"
3. Check "English", click on "GO"
4. Choose **"2004 Sport Boat Technical Update"** course by clicking on the yellow folder next to it.
5. Click on "Enroll" at the bottom of the screen
6. Click on "learning environment" (in white)
7. You are now back to your learning environment; click on **"2004 Sport Boat Technical Update"** to begin the exam.

The passing grade is 75%

Notes: You always have three (3) opportunities to take an exam. If you do not pass after three attempts, you will be restricted from taking the exam for a period of 30 days. During the 30 days, you should study the course, review the material, then re-test.

SECTION

1

2004 Technical Update
General Information

The objective of Section 1 is to make contacts between dealers and BRP as easy as possible.

In Section 1 you will find the most important phone numbers, key contact names and the latest updated procedures to help you be more efficient.

IT'S EASY TO REACH US

The *Dealer Network Support Group* has a consolidated structure that combines all of our core services, thus allowing you easy access to eleven services with ONE TOLL FREE NUMBER.

Just dial:☎ *One Toll-Free Number*

From U.S.: ☎1-800-366-6992

For Dealer use only

From Canada: ☎1-800-361-9980

For Dealer use only

It's Quick and Easy

This is the new phoning procedure for contacting us:

Dial the same numbers:

Enter your BRP dealer number to access your support services.

Listen to the first menu and choose the service by pressing the number key on your telephone.

Listen to the second menu tone and choose the appropriate subject category.

These phone numbers are for dealer use only: Do not give these phone numbers to customers as this will have a serious impact on your ability to reach us.

BRP Network Support		
Service	**Shortcut path using phone keys**	
PAC	1 - 1	PAC Analysts
	1 - 2	PAC & BEST Sales Information
Technical Service	2 - 1	Technical Ski-Doo
	2 - 2	Technical Sea-Doo
	2 - 3	Technical ATV
	2 - 4	Technical Sport Boat
Warranty	3 - 1	Warranty Vehicles and Parts
	3 - 2	Clothing Warranty
BOSSWeb and Technology Support	4	BOSSWeb and technology Support (Including BUDS, PACPro & EPC)
Sales Coordinator & Vehicle Shipping	5 - 1	If you know your Regional Coordinator extension…
	5 - 2	US Dealer Coordinators
	5 – 3	Canadian Dealer Coordinators
	5 - 4	Vehicle Shipping
All Other Services	6 – 1	Consumer Assistance
	6 – 2	BPR Pro
	6 – 3	Signage and Co-op
	6 – 4	Dealer Certification
	6 - 5	Training B.R.P.T.I.

Before You Call the Service Department :

Be prepared :

The BRP Service Department values your call. In fact, you are the reason that we are here! Your input and information are vital to our department, and accuracy is critical. In an effort to provide the best service to you, we ask you to observe the following guidelines:

Review the service material that you already have :

Check your service library for any publications that may assist you with your problem. Often the answer is already in your hands in the form of manuals, bulletins, spec books, etc.

Check BOSSWeb :

All bulletins and campaigns can be found on BOSSWeb. Verify the unit history on each vehicle to see if there are any pending campaigns.

Have vital information close at hand :

You will always be asked for your dealer number, the vehicle model, serial number and the vehicle mileage/hours. You will also be asked if there is already a call identification number logged on the vehicle or customer in question. Not having this information readily available is very common and slows the system down for everybody.

Verify the customer's complaint :

If you are contacting your Service Representative for assistance, you should be able to describe the problem accurately, with factual information.

Verify the warranty status :

Is the unit in warranty, out of warranty, or covered by a BEST contract? If it is covered by BEST, have the contract number available as well as maintenance history if available.

Take names and Call ID:

Every BRP representative will identify themselves when answering your call. Do not complete the call without noting who you spoke with. Your call will also be logged in the computer system. Make sure you ask for the call I.D. number and put it on the repair order.

"Who's Who": Dealer Technical Support

Call the Service Reps to get technical assistance and to get a Warranty authorization number.

Rich Klein Manager ☎ **(715) 842-8886** 🖷 **(715) 847-6879**

Service Representatives:

☎ **U.S.: (800) 366-6992**
Canada: (800) 361-9980

🖷 **U.S.: (715) 847-6879**
Canada: (819) 566-3062

Alain Doucet (English / French)
Claude Beaudoin (English / French)
Dennis Sawyer (English / French)
Ian McAuliffe (English)
Jeff Downs (English)
John Lofy (English)
Mike Carter (English)
Patrick Eppolite Sr (English)
Paul Literski (English)
Richard Cossette (English / French)
Rosaire Goudreau (English / French)
Simon Belzile (English / French)

"Who's Who": Performance and Quality of Product

Kurt Otteson
Field Product Quality Specialist

☎ **U.S. (800) 366-6992 or (618) 439-9444**
☎ **Canada (800) 361-9980**
🖷 **(618) 439-8724**
✉ **kurt.otteson@brp.com**

"Who's Who": B.R.P.T.I.

(Bombardier Recreational Products Training Institute)

Call for questions concerning B.R.P.T.I. web training, DVD's, exams or for the Dealer Certification.

Georgie Johns (English)

☎ **U.S.: (800) 366-6992**
Canada: (800) 361-9980

✉ **brpti@brp.com**

Christian Larose (English & French)

🖷 **U.S.: (715) 847-6879**
Canada: (819) 566-3062

"Who's Who": RAM (Regional After Sales Manager)

US, North East Region
Jean-Pierre Foucault
Bombardier Recreational Products Inc.
31 Henderson Rd – Unit #10
Gilford, N.H. 03249
☎ (603) 293-8454
🖷 (603) 293-8224
✉ jean-pierre.foucault@brp.com

US, Central Region
Perry White
Bombardier Recreational Products Inc.
2604 Merganser Way
Wausau, Wi 54401
☎ (715) 848-8800
🖷 (715) 848-2371
✉ perry.white@ brp.com

US, West Region
To be determined
☎ TBD
🖷 TBD
✉ TBD

US, South East Region
Rodney (Rod) Thompson
Bombardier Recreational Products Inc.
896 Kersfield Circle
Heathrow, FL. 32746
Address TBD
☎ (407) 833-8862TBD
🖷 (407) 833-8862TBD
✉ rodney.thompson@brp.com

Canada, East
Charles Bedard
Bombardier Recreational Products Inc.
275 Des Mouettes
Beloeil, QC J3G 5A2
☎ (450) 467-8950
🖷 (450) 467-9009
✉ charles.bedard@ brp.com

Canada, West
Wade McDonald
Bombardier Recreational Products Inc.
2497 Pinewood Drive
Winnipeg, Manitoba R3J 0C3
☎ (204) 837-3094
🖷 (204) 837-2765
✉ wade.mcdonald@brp.com

"Who's Who": Legal Coordinator

Nancy Larsen ☎ **(715) 842-8886** 🖷 **(715) 847-6879**

"Who's Who": International Distributor - After Sales Support

Ronald Hurner Senior Coordinator International After Sales & Service	☎ +1 819 566-3086 ron.hurner@brp.com	🖷 +1 819 566-3457
Australia		
Paul Dawson	☎ +612-9794-6615 paul.dawson@brp.com	🖷 +612-9794-6651
Gary Nixon	☎ +612-9794-6600 gary.nixon@brp.com	🖷 +612-9794-6651
Bruce O'Dowd	☎ +612-9794-6600 bruce.o'dowd@brp.com	🖷 +612-9794-6651
Europe, Middle East & Africa + Russia		
Oliver Leitner	☎ +32-9-272-63-62 oliver.leitner@brp.com	🖷 +32-9-272-63-49
Karel Bogaerts	☎ +32-9-272-63-63 karel.bogaerts@brp.com	🖷 +32-9-272-63-49
Latin America		
David Rummel	☎ +1 954-846-1434 david.rummel@brp.com	🖷 +1 954-846-1476
Rene Morales (all except Brazil)	☎ +1 954-846-1424 rene.morales@brp.com	🖷 +1 954-846-1476
Alfredo Padron (all except Brazil)	☎ +1 954-846-1407 alfredo.padron@brp.com	🖷 +1 954-846-1476
Ednilson Beneli (Brazil only)	☎ +55-19-3716-8605 ednilson.beneli@brp.com	🖷 +55-19-3246-3800
Carlos Parra (Brazil only)	☎ +55-19-3716-8616 carlos.parra@brp.com	🖷 +55-19-3246-3800
Japan		
Makoto Numajiri	☎ +81-44-200-1431 makoto.numajiri@brp.com	🖷 +81-44-200-1432
Asia		
John Koh	☎ +65-622-767-55 ext. 103 john.koh@brp.com	🖷 +65-622-629-32
Scandinavia		
Pekka Tiuraniemi	☎ +358 16 3208 128 pekka.tiuraniemi@brp.com	🖷 +358 16 3420 316
Jorma Kukkola	☎ +358 16 3208 132 jorma.kukkola@brp.com	🖷 +358 16 3420 316

"Who's Who": Customer Assistance Center

CAC Representatives respond to customers and dealers who call, write, or e-mail the Customer Assistance Center by giving information, investigating complaints, or referring callers/writers to the appropriate department within BRP.

☎ **For Retail Customers:**	**In USA: (715) 848-4957** **In Canada: (819) 566-3366**
🖷 **For Retail Customers:**	**(819) 566-3062**
Mailing address for Retail Customers:	**Customer Assistance Center** Bombardier Recreational Products Inc. 565 de la Montagne Street Valcourt, Québec, Canada J0E 2L0

Warranty Parts Return **(for dealers only)**

Canadian Dealers:

Bombardier Recreational Products Inc.
C/O Warranty Parts Center
565 De La Montagne
Valcourt, Qc J0E 2L0

U.S.A. Dealers:

Bombardier Motor Corporation of America
C/O Warranty Department
7575 Bombardier Court
Wausau, WI 54401

Make sure that the correct copy of the BOSSWeb claim or paper claim is included with the exact part returned and properly tagged, otherwise this may cause a delay in processing your claim.

Dealers dealing with North West Co. Inc. must forward the parts, warranty claim and documents to their respective distributor's office.

For complete details concerning returning warranty parts, clothing, etc., please refer to the Warranty Guide on BOSSWeb.

Radio Warranty and Repair

In the US:	Prospec Electronics	**In Canada:**	L.F.Burgess and Associates
☎	(800) 394-1914	☎	(519) 647-3222
☎	(843) 849-9037	🖷	(519) 647-3226
🖷	(843) 849-9054	✉	E-mail info@lfbugess.com

- JVC and Seaworthy radios are covered by a Prospec/Burgess warranty.
- A return authorization is required from Prospec/Burgess prior to return unit.
- Prospec/Burgess will repair or exchange at their discretion.
- For new radio immediately, need credit card. ($5 fee).
- BRP will cover labor (please get an authorization from a Service Representative).

Warranty Period:

- CD player: 1 year limited warranty, from purchase date.
- Cassette Player: 2 year limited warranty, from purchase date.

Handling Procedure:

1. When calling Prospec/Burgess, make sure to have the following information available:
   - Radio model & serial number (found on chassis)
   - Date boat was sold (copies to be included in return)

This information is mandatory to determine the warranty coverage period.

2. Make sure to write the return authorization number outside of the box. Include also the dealer's name, complete address and key contact at dealership.

3. Send the complete radio, face plate, etc. via UPS prepaid, to the following address:

In the US:	**Prospec Electronics** **3325 Highway 17 North** **Mount Pleasant, SC, 29466**	**In Canada:**	**L.F. Burgess and Associates.** **177 Lynden Rd.** **Lynden, ON. L0R-1T0**

4. Prospec/Burgess, upon receipt of the product will repair and return the product to the dealer within 72 hours typically; unless during the peak season, at which times may vary.

5 Should Prospec/Burgess find a reason to charge a dealer (out of warranty, neglect, abuse or missing parts), the dealer would be called and told of the situation, about the charges and would be asked for a valid credit card number for billing purposes.

Note: For Clarion radios please refer to the Administrative Bulletin 97-4.

Trailer Warranty and Repair

For 2002, all Sea-Doo trailers are made by Karavan. BRP does not stock any parts or administer warranty for these trailers. To help identify the trailer manufacturer, the first characters of serial # for each brand we have used are listed with the manufacturer's information.

Karavan: Serial # **5KTB**	Karavan Trailers, 100 Karavan Dr., Fox Lake, WI. 53933 920-928-6200 fx 920-928-6201 #128 Leo Merkes karavan@powerweb.net
Rivalair: Serial # **2RV**	Out of business. For parts- Call Karavan. Trailer warranty was 1 year administered by Bombardier Recreational Products Inc.
Shorelander: Serial # **1MD**	Midwest Industries, Hwy 59+175, Ida Grove, IA. 51445 (712)364-3365 fx (712) 364-3361

Explorer Tube Warranty and Repair

- Tubes are covered under warranty by BRP for 1 year.
- Hypalon material is covered by the manufacturer for 5 years.

For repair: Dockside Inflatable Service (Gary Carman)
519 S.E. 32nd CT.
Fort Lauderdale, FL, 33316
(954) 527-1399 fx (954) 527-5146 Cel (954) 270-8457
docksideis@aol.com

Georgian Bay Inflatables (Brad Ansell)
79 Chanplain Road
Penetang, ON. Canada, L9M-2G2, (705) 549-6643

Fiberglass Warranty and Repair

- There is a 60 month hull structural warranty on all 14' and longer Sea-Doo sport boats.
- To claim use system 12.
- You need to get an authorization from a Service Representative.
- Use these part numbers on your Warranty Claims:
    - Hull p/n – 999999000
    - Deck p/n – 999999001
    - Assy p/n – 999999002

FishHawk Boat Parts Information (for dealers only)

NOTE: When a FishHawk supply part is shown as depleted in BOSSWeb, dealers should then contact GenMar Holdings, Inc. http:\\www.genmar.com

Johnson/Evinrude (For dealer only)

Technical Support:	US + CA – (800) 888-4662
Customer Assistance:	US + CA – (847) 689-7090

Mercury (For dealer only)

Dealer Technical Support:	US – (920) 929-5884 or fax (800) 842-4550 CA – (905) 567-8515 or fax (800) 663-8334
Technical Training:	US – (920) 929-5552 or fax (800)842-5929 CA – (905) 567-8515 or fax (800) 663-8334

For faster service fill out a "Quick Fax" or "OptiMax DDT Worksheet" and fax it to Mercury.

Customer Assistance:	US – (920) 929-5040 CA – (905) 567-6372

Gelcote International (For dealer only)

Phone	US and Canada (613) 225-2177
Toll free:	US and Canada (877) GEL-COTE (435-2683)

Email: info@gelcote.com

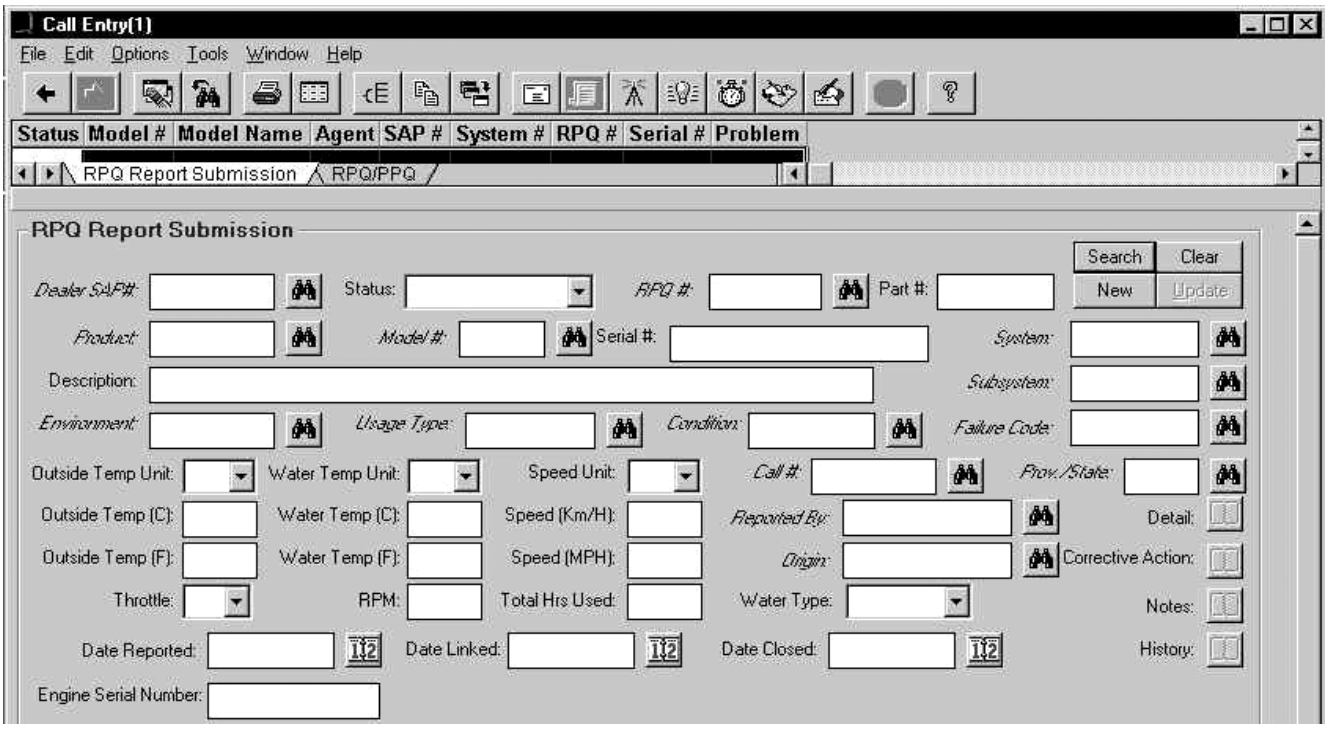
RPQ Reporting
(Reports on Performance and Quality)

RPQ reporting is necessary in order to relay all information to the Engineering Department.

This process ensures that any network concern will be well documented to provide an accurate response in the shortest period of time possible. Please refer to Administration Bulletin 2000-02 for more details.

Below is a sample of the main RPQ screen each Service Representative must fill out with your help. By compiling data, we can evaluate any trends development in the field. Please be prepared to provide all pertinent information.

Mandatory fields :
- Dealer #
- Model and serial number
- Description of concern
- Mileage/hour, temperature, any special condition, etc…



Feel free to contact your Service Representative to report any issue. A form is also available in the Annexes Section; it can be filled out and faxed to a Service Representative.

Importance of PDI

Was the PDI Check List properly filled out and filed?

Was it signed by the customer?

Legal protection

• The PDI provides documented proof that you have reviewed the operation and maintenance procedures for the boat with the customer.

Sell : Value for the money

• The PDI gives the customer assurance that a proper pre-delivery inspection has been performed on the boat, as well as the ability to show all the steps required to justify the expense of “set-up charges”.

Professionalism

• In today’s marketplace, customers have come to expect nothing but the best from a well-trained service department. With the PDI sheet completed and signatures from each person involved, you can show your commitment to excellence. When a customer leaves your dealership he should be aware of and have, the operator’s guide, and safety videocassette as well as his sales information, PDI sheet and proof of registration.

Where do I find this document?

• It is included with every BRP boat.

I would like to know more about it!

• There is an easy way to learn more about the delivery process; you may want to view the DVD:

Introduction to Dealer Development Training DVD Volume 1 (P/N 219 700 256)

From the B.R.P.T.I. (Bombardier Recreational Products Training Institute) DVD series

BOMBARDIER
RECREATIONAL PRODUCTS

SEA-DOO Sport Boats

MODEL NUMBER	HULL IDENTIFICATION NUMBER (H.I.N.)

PREDELIVERY CHECK LIST

THIS CHECK LIST MUST BE USED IN CONJUNCTION WITH THE PREDELIVERY BULLETIN OF THE APPLICABLE SPORT BOAT.

POTABLE WATER SYSTEM (if so equipped)

Potable water system should always be disinfected and flushed before delivery to customer.

Refer to the *Operator’s Guide* for complete detailed procedure.

DESS (Digitally Encoded Security System) (if so equipped)

The sport boat cannot be started and used without programming the safety lanyard.

The use of the following tool is mandatory for programming:

VCK (Vehicle Communication Kit) and the B.U.D.S. (Bombardier Utility and Diagnostic Software) (P/N 529 035 844).

OR

MPEM programmer (P/N 529 035 878) with version 3.3 and up (**except on 4-TEC models**).

For detailed information pertaining to the use of the VCK, use the help menu inside the B.U.D.S. software or if using the MPEM programmer, refer to the guide that is shipped with it.

When programming, first start by erasing the previously programmed keys at factory THEN, program the safety lanyard that is shipped with the sport boat.

NOTE: Some parts or accessories may apply to a particular model only. To find out specific parts or accessories of a sport boat, refer to appropriate *Predelivery Bulletin.*

PARTS INSTALLATION	✓
Battery	
Trailer wheels (if necessary) (refer to trailer *Owner’s Guide*)	
French labels (if applicable)	
For sport boats used in Canada: Apply the Canadian Coast Guard Compliance Label	

LIQUIDS	✓
Battery(ies) electrolyte	
Fuel	
Injection oil (**2-stroke models**)	
Check engine oil **(4-TEC models)**	
Purge coolant system(s) of air and check coolant levels **(4-TEC models)**	

ADJUSTMENTS	✓
Steering alignment	
Throttle cable(s)	
Controller (throttle/shifter)/select or lever cables	
Weedless system	
Idle speed	
Trailer (refer to trailer *Owner’s Guide*)	

GENERAL INSTRUCTIONS

FINAL INSPECTION	✓
Inspect movement and operation of:	
Throttle lever(s)	
Monitoring beeper(s)	
Safety lanyard/DESS and engine start/stop button(s)	
All gauges	
Navigation lights	
Bilge blower	
Bilge pump	
Controller (throttle/shifter)/selector lever	
Main battery cut-off switch	
Pressurize fuel system and lubrication system (apply proper pressure)	
Water test sport boat	
Wash trailer with fresh water	
Clean sport boat thoroughly and polish	
Check all items on *Mercury Predelivery Inspection Sheet* (where applicable)	
Verify trailer wheel lug nuts torque (refer to trailer *Owner’s Guide*)	

AT SALE, EXPLAIN TO OWNER	✓
Bombardier documentation: *Operator’s Guide* and warranty (and Mercury documentation where applicable).	

AT DELIVERY	✓
Complete and return Bombardier warranty registration signed by owner (and Mercury warranty registration where applicable).	

PREPARED BY:	DATE: day month year
DEALER NO.:	
INSPECTED BY:	DATE: day month year
DEALER SIGNATURE: ✗	

The dealer named on this document has instructed me on the operation, maintenance, safety features and warranty policy, all of which I understand. I am also satisfied with the predelivery set-up and inspection of my sport boat. I have also received a copy of the *Operator’s Guide* for my craft.

OWNER SIGNATURE: ✗	DATE: day month year
PRINT:	

NOTE: File this document in sport boat file. Give a copy to owner.

Printed in Canada (LBL2004-001A.FM SB)

204 630 307
Page 1 of 1

The BRP ELECTRONIC PARTS CATALOG is here!

- **FAST** parts look-up
- **ACCURATE** up-to-date information
- **INTEGRATED** into BOSSWeb and many Dealer Management Systems

Ordering your parts has just become that much easier!

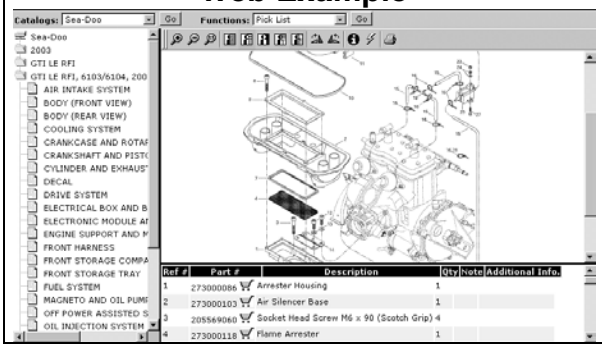
The BRP ATV, Sea-Doo Watercraft, Sport Boat Electronic and Ski-Doo Parts Catalogs are now available on the Web or on the PartSmart CD.

The Web version of Electronic Parts Catalog is included in the monthly fee so there is **NO extra billing**.

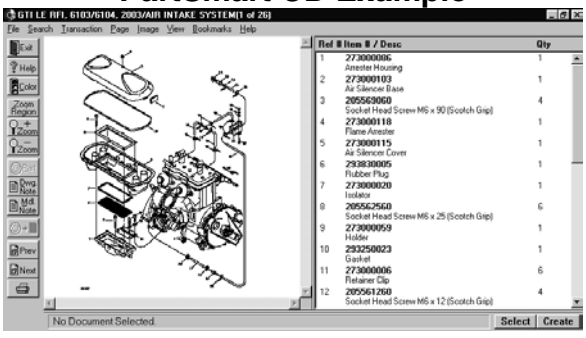
Here are some of the Electronic Parts Catalog highlights:

	Web Version	PartSmart CD
Parts look-up & ordering	✓	✓
Hotspotting for easy part identification	✓	✓
Updates for error reduction	**Weekly**	**Bi-annually** (ability to bring corrections)
Print Part images and Part lists	✓	✓
Can be installed on a single workstation or on a network		✓

Web Example



PartSmart CD Example



*Please note that PartSmart does not interface with “Lightspeed / Bell & Howell (ProQuest)” Dealer Management Systems. If you are a user of FicheFinder integrated to Lightspeed, you will remain supported through this supplier.

Visit the web version at: www.bossweb.BRP.com, ComCenter/Parts Catalogs

For assistance, do not hesitate to contact the BOSSWeb Help Desk:
☎ **(800) 366-6992** (USA) ☎ **(800) 361-9980** (Canada)

BOSSWeb Tips and Tricks: E.T.A.

You can now see on various BOSSWeb screens, Estimated Time of Arrival (E.T.A.'s) for some our your critical back ordered items:

PARTS – PARTS AVAILABILITY SCREEN

Tip : You must choose a product line while consulting this screen to avoid error messages such as: Error! 14: Material not saleable".

Parts - Parts Availability

Search Results

Ex.	Part Number	Description	Year	B/O	Avail. Qty	Retail	Cost	Markup	Sales Unit	Price Unit
	707800072	FILTER-AIR	2003	1	0	17.47$	10.24$	41%	PC	PC
	420256188	FILTER-OIL	2001	1	0	10.47$	6.24$	40%	PC	PC
		E.T.A. : WEEK OF JUNE 4, 2004								

PARTS – ORDER STATUS

Tip : Click on the right hand « Order status » to see posted ETA information

Search Results

Bombardier Order Number	Order Date	Your Order Number	Terms	Order Type	Order Status
1003336481	2004/5/26	4304	Net 30 Days	Regular	Partially Delivered

PARTS – BACK ORDER LIST

Parts - Order Status

Order Details

Bombardier Order Number 1003336481

Ex.	Item	Part Number / Description	Req. Qty	B/O / Memo / Expected Availability Date	Alloc.	XAlloc.	Shipped / Ship Date	UOM / Ship Item No.	Del. UOM / Last Ship No.
USE	10	420280280 V BELT	2	0 STOCK	2	0	0	PC	PC
*	20	715900024 COURROIE ENTRAIN*V BELT	2	0 STOCK	2	0	2 2004/5/31	PC 10	PC 8000321705
	30	420256188 FILTER-OIL	3	3 STOCK E.T.A. : WEEK OF JUNE 4, 2004	0	0	0	PC	PC

Parts - Back Order List

Search Results

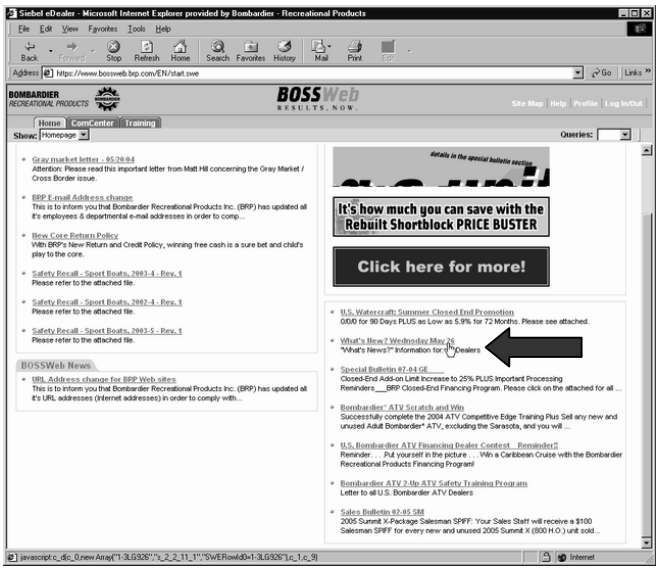
Part Number - Description	Order Qty	B/O Qty / Expected Availability Date	Bombardier Order Number	Item	Your Order Number	Order Type	Order Date	Memo	Cancel item
420256188 - FILTER-OIL	3	3 E.T.A. : WEEK OF JUNE 4, 2004	1003336481	30	4304	Regular	2004/05/26	STOCK	
707800072 - FILTER-AIR	2	2	1003332312	20	4292	Regular	2004/05/24	STOCK	

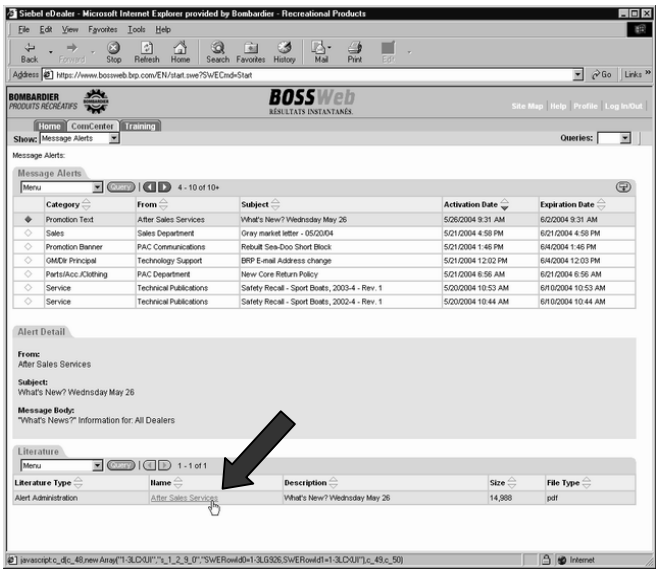
"What's News" Letter

Hot Tips and Tricks From Your After Sales Group, Posted Weekley

Once a week, the What's News letter is published on BOSSWeb.
It provides the latest news from the After Sales Department.

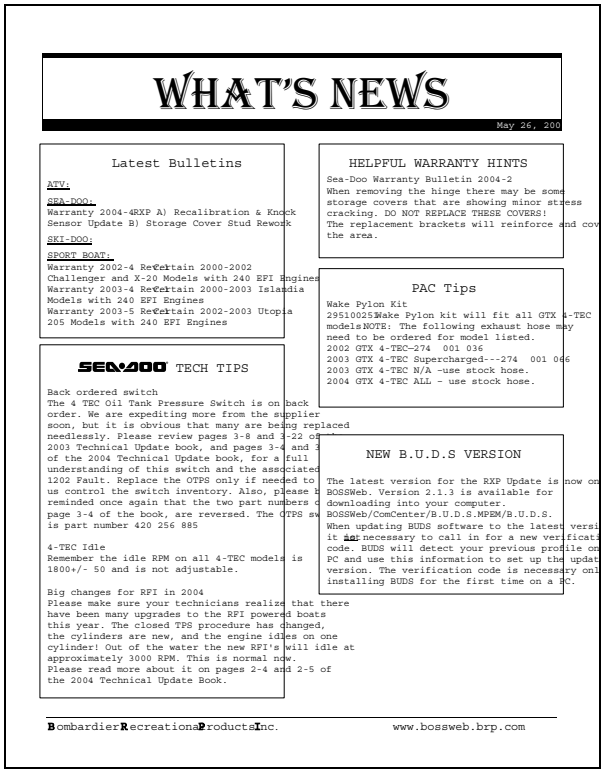
Go to BOSSWeb (www.bossweb.brp.com). From the home page, select the "What's News" links.





This is an example of the May 26, 2004 What's New letter.

BOSSWeb is the only place you will find this letter.



WHAT'S NEWS

May 26, 200

Latest Bulletins

ATV:

SEA-DOO:

Warranty 2004-4RXP A) Recalibration & Knock Sensor Update B) Storage Cover Stud Rework

SKI-DOO:

SPORT BOAT:

Warranty 2002-4 Re[illegible]rtain 2000-2002 Challenger and X-20 Models with 240 EFI Engines
Warranty 2003-4 Re[illegible]rtain 2000-2003 Islandia Models with 240 EFI Engines
Warranty 2003-5 Re[illegible]rtain 2002-2003 Utopia 205 Models with 240 EFI Engines

SEA-DOO TECH TIPS

Back ordered switch
The 4 TEC Oil Tank Pressure Switch is on back order. We are expediting more from the supplier soon, but it is obvious that many are being replaced needlessly. Please review pages 3-8 and 3-22 of the 2003 Technical Update book, and pages 3-4 and 3 of the 2004 Technical Update book, for a full understanding of this switch and the associated 1202 Fault. Replace the OTPS only if needed to us control the switch inventory. Also, please b reminded once again that the two part numbers c page 3-4 of the book, are reversed. The OTPS sw is part number 420 256 885

4-TEC Idle
Remember the idle RPM on all 4-TEC models is 1800+/- 50 and is not adjustable.

Big changes for RPI in 2004
Please make sure your technicians realize that there have been many upgrades to the RPI powered boats this year. The closed TPS procedure has changed, the cylinders are new, and the engine idles on one cylinder! Out of the water the new RPI's will idle at approximately 3000 RPM. This is normal now. Please read more about it on pages 2-4 and 2-5 of the 2004 Technical Update Book.

HELPFUL WARRANTY HINTS

Sea-Doo Warranty Bulletin 2004-2
When removing the hinge there may be some storage covers that are showing minor stress cracking. DO NOT REPLACE THESE COVERS! The replacement brackets will reinforce and cov the area.

PAC Tips

Wake Pylon Kit
29510025Wake Pylon kit will fit all GTX 4-TEC models NOTE: The following exhaust hose may need to be ordered for model listed.
2002 GTX 4-TEC-274 001 036
2003 GTX 4-TEC Supercharged---274 001 066
2003 GTX 4-TEC N/A -use stock hose.
2004 GTX 4-TEC ALL - use stock hose.

NEW B.U.D.S VERSION

The latest version for the RXP Update is now on BOSSWeb. Version 2.1.3 is available for downloading into your computer.
BOSSWeb/ComCenter/B.U.D.S.MPEM/B.U.D.S.
When updating BUDS software to the latest versi it is not necessary to call in for a new verificati code. BUDS will detect your previous profile on PC and use this information to set up the updat version. The verification code is necessary onl installing BUDS for the first time on a PC.

BombardierRecreationalProductsInc. www.bossweb.brp.com

Book and DVD Quick P/N Reference

Technical Book	English	French
BRP Guide to Service Fundamentals and Principles	484 800 168	484 800 167

Sea-Doo sport boat video	English & French	
2004 Sea-Doo sport boat Competitive Edge video	297 000 870	297 000 878

Technical DVDs	English & French
DVD Series Training Kit (includes a DVD player, Tech DVDs Vol 1 to 5 & Intro to B.R.P.T.I. DVD)	295 500 954
Intro to B.R.P.T.I. DVD	219 700 196
DVD1 Engines	219 700 197
DVD2 Electrical Systems	219 700 198
DVD3 Fuel Systems	219 700 199
DVD4 Suspensions / Chassis / Steering	219 700 200
DVD5 Transmissions / Drive Lines	219 700 201
DVD6 Supercharger (Sea-Doo)	219 700 273

Dealer Development Training DVDs	English & French
Introduction to Dealer Development Training - DVD1	219 700 256
Dealer Development Training - CSI - DVD2	219 700 325
Dealer Development Training - Service Department Operation - DVD3	219 700 329

Sea-Doo Sport Boat Shop Manual Quick Reference

Please use this chart to determine the correct Shop Manual for the following boats

Year	Model	English	French
2000/2001/2002	Speedster, Speedster SK, Sportster 1800, and Challenger 1800/2000	219 100 107	219 100 106
	Islandia	219 100 115	219 100 116
	Sportster LE (supplement)	219 100 119	219 100 120
	Utopia 185/205	219 100 135	219 100 134
	Explorer (supplement)	219 100 137	219 100 136
2003	Speedster and Challenger 1800/2000/X	219 100 162	219 100 163
	Islandia	219 100 115	219 100 116
	Sportster 4-TEC	219 100 172	219 100 173
	Sportster LE	219 100 119	219 100 120
	Utopia 185/205	219 100 135	219 100 134
2004	Speedster and Challenger 1800/2000/X	219 100 162	219 100 163
	Islandia	219 100 115	219 100 116
	Sportster 4-TEC	219 100 172	219 100 173
	Sportster LE (supplement)	219 100 119	219 100 120
	Utopia 185/205	219 100 135	219 100 134
	Speedster 200	219 100 185	219 100 184

NOTE: Some boats use a previous year Shop Manual. Every Supplement must be used with its corresponding complete Shop Manual.

Accident Procedure

Since BRP wants to monitor all aspects of accidents involving any BRP product, please call our toll free hotline to report the accident and communicate to us any relevant information.

In general :

If you are aware that a BRP product is involved in an accident, which has the potential to be related to product quality, or you or BRP are being accused as being responsible, listen and report all the facts (names, addresses, serial numbers, circumstances, etc.).

In the event of fatality or serious accident :

If a fatality or serious injury occurs in your area involving any BRP product, we ask dealers to adhere to the following procedure. Immediately contact one of the following:

Nancy Larsen (English) Legal Coordinator	☎ **(800) 366-6992** **ext.: 4967**	🖷 **(715) 847-6879**
Rich Klein (English) Manager Technical Support	☎ **(800) 366-6992** **ext.: 6836**	🖷 **(715) 847-6879**
Ghislain Cossette (French) After Sales Services Manager	☎ **(450) 532-2211**	🖷 **(450) 532-6313**

- The accident report should be completed and signed by the owner/operator; then sent to the BRP Wausau office. (fax: 715-847-6879; Mail: 7575 Bombardier Court, Wausau, WI 54401). Ensure the date of the narrative is filled in.
- Call a Service Representative to open a file…you will be advised what to do next.
- Report facts only. Do not investigate or commit yourself, BRP, or others.
- The owner should bring the vehicle to you in order to facilitate the investigation.
- Isolate and cover the vehicle. Do not make any repairs pending further investigation.
- Take photographs of the damaged product, as verification of the damages, and to avoid any potential claim that the product was destroyed, modified or the evidence was lost.
- In case of PERSONAL INJURIES - DO NOT REPAIR THE PRODUCT. Contact one of the above contact persons.
- Make no admissions, or assumptions on the cause.
- Keep BRP informed of any further developments.

The BRP Accident Report Form is available from BOSSWeb or in the Annexes Section of this book.

SEA-DOO Sport Boats | BRP

SECTION
2

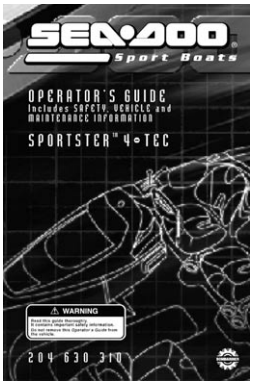
2004 Technical Update
What's New

The objective of Section 2 is to give the opportunity to dealers and technicians to learn and understand the differences between the 2003 and 2004 models.

IN ALL SEA-DOO SPORT BOAT

What's New

Safety guide has been integrated into the Operator's Guides.



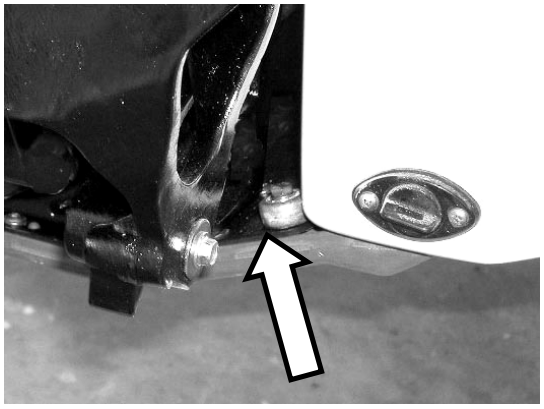
Why:

Standardization/ease of use.

What's New

ON ALL 4-TEC-EQUIPPED MODELS

An anode was added to the ride shoe/cooling plate.
For extreme conditions, there is also a similar location to add a second anode on the other side (left side) of the ride shoe.



Why :

For improved resistance to corrosion.

The new ride shoe fits on previous models, but the anode only will not fit alone on previous ride shoe versions.

ON ALL 4-TEC-EQUIPPED MODELS

What's New

New noise canceling system Part of D-SEA-BEL . This polymer resonator replaces tuned components and the resonator that were use in the previous versions.

Why :

Simpler exhaust system, lighter component, less exhaust restriction and reduced sound level.

CERTAIN 4-TEC MODELS

WHAT'S NEW :

New larger bearing pump

Why :

Standardization

CERTAIN 4-TEC MODELS

WHAT'S NEW :

A larger bearing is now used in the composite impeller housing.

Why :

Stronger component.

ON ALL 4-TEC MODELS

WHAT'S NEW :

A through hull fitting has been developed for servicing.

- 4-TEC-EQUIPPED BOATS
  P/N 292 000 975

Why :

New part for service.

Retrofits the previous 4-TEC models.

WHAT'S NEW :

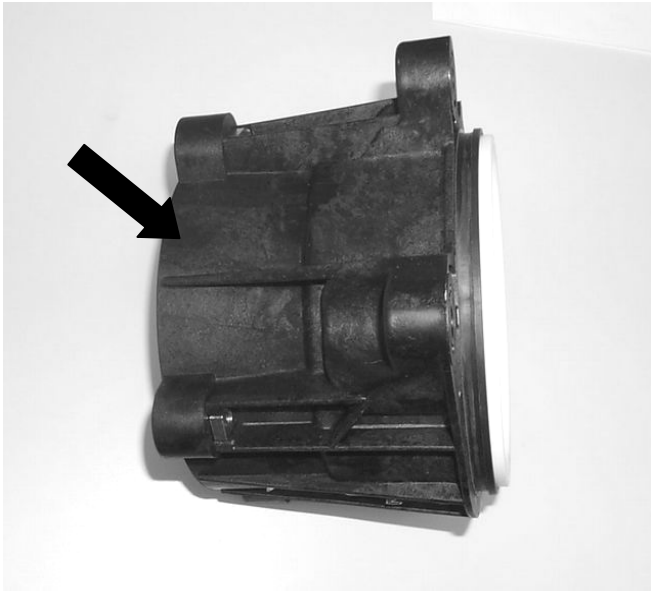
The anchoring tabs on the impeller housing to the venturi are now machined flush with the pump housing.

Why :

For improved fit between the impeller housing and the venturi. The venturi remains the same.

Fits on previous models.

4-TEC MODELS



SEA-DOO Sport Boats | BRP

SECTION
3

2004 Technical Update Troubleshooting & Tech Tips

In this section you will find the most current tips and solutions concerning situations that occured during last season, as well as the latest updated procedures.

Note: All troubleshooting procedures should be used in conjunction with the Shop Manual and other BRP service publications.

4-TEC Engine: OPS and OTPS

We heard many times last year from customers bringing their Sea-Doo 4-TEC-equipped boat to the shop saying that it would only go so fast, that the OIL warning or Check Engine would be displayed on the cluster gauge, the buzzer would go off, the LED would flash on the cluster gauge, etc. The problem was hard to duplicate, and at times no fault codes were recorded.

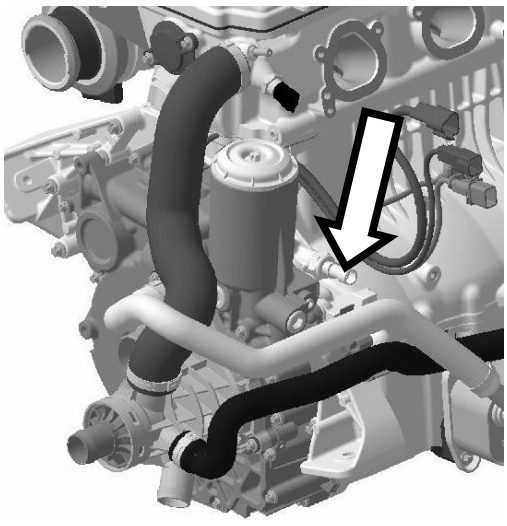
We had some issues with both the OPS and OTPS in that they did not provide a proper ground to the ECU. Many times the above-mentioned problems were the end result of a faulty OPS or OTPS. It is important to understand that these switches ARE NOT related. They have entirely separate circuits! The confusion comes because they are both related to oil and they are both pressure switches.

- **OPS: Oil Pressure Switch** (OLD P/N 420 256 777) **NEW P/N 420 856 530**
- **OTPS: Oil Tank Pressure Switch** (OLD P/N 420 256 880) **NEW P/N 420 256 885**

We issued **Service Bulletin (2003-13)** regarding these switches. If after properly troubleshooting the respective switch and circuit, and nothing was found that could lead to the above described issues, replace the switch causing the problem.

Many parts were needlessly replaced last year, and hours of troubleshooting were wasted because tech's were mistakenly troubleshooting the wrong switch and respective circuits. Below are the facts and troubleshooting tips on these 2 switches.

OPS (Oil Pressure Switch)



The OPS is located on the right-hand side of the engine, just forward of the oil filter.

A normally open switch that will switch to ground and provide that ground to the ECU, if there is sufficient oil pressure (26-32 PSI and higher) *and* the RPM's are greater than 3250.

If oil pressure is below spec, the switch will not activate, and the ECU will not receive a ground. As a result, OIL will be displayed on the cluster gauge, the LED will illuminate, and the buzzer will continuously sound. It will also be in the 2500 RPM limp home mode. No fault codes will be recorded!

The same thing will happen if the switch is bad, and does not provide a ground to the ECU!

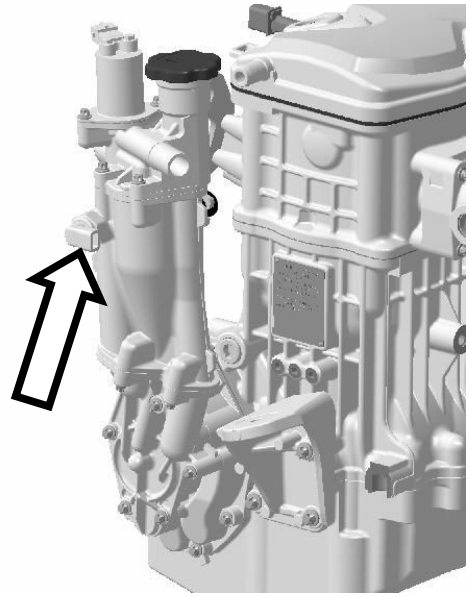
Troubleshooting the OPS

-Verify Oil Pressure.
-Verify continuity between the OPS connector and the ECU connector.
-Ensure OPS connector is making good contact with the OPS.
-Ensure the ECU Kostal connector is making good contact with the ECU.
-You can fool the system by starting the engine, then grounding the OPS connector. If the problem goes away (and of course the oil pressure is within specs), then the wiring from the connector to the ECU is OK, and the switch connection or the switch itself is most likely the cause. (If the connector is grounded prior to starting the engine, the ECU sees a ground that is not supposed to be there, and Fault Code P0520 will be tripped).
-Again, at times the problem may be hard to duplicate. So, if after troubleshooting and no discrepancies are found, replace the OPS.

OTPS Oil Tank Pressure Switch (or as it is called in the Service Manual – OSPS - Oil Separator Pressure Switch).

On the 4-TEC engine, the OTPS (Oil Tank Pressure Switch) is actually a crankcase pressure switch and is located at the front of the engine on the oil/air separator assembly. This switch is normally closed to ground, so in normal operation the switch provides a ground to the ECU. If the crankcase pressure exceeds approx. 4 psi, the switch opens, the ECU loses the ground and activates fault code P-1202 ***after*** *3 to 5 minutes* of running. CHK ENG will displayed on the cluster gauge and the engine will go into the 5000 RPM limp home mode.

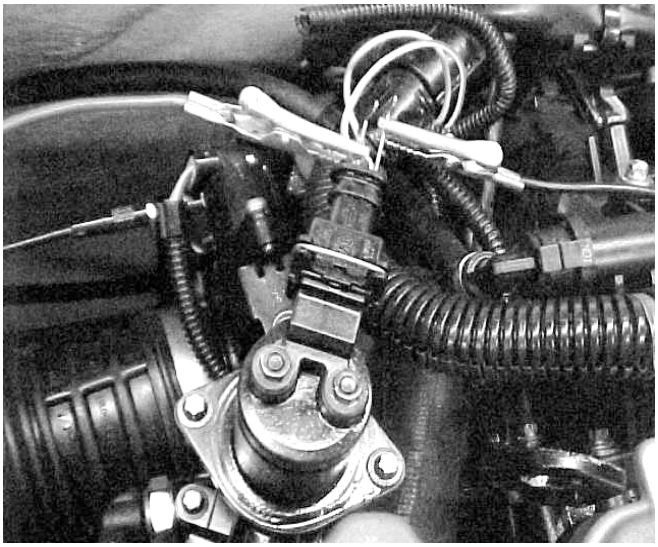
The same thing will happen if the OTPS is bad!



The blow-by solenoid, located on the oil/air separator, has 2 blow-by valves attached to it. When it is energized, the 2 blow-by valves lift to uncover ports and allow the crankcase to vent. It energizes with an audible 'click' when the lanyard is installed on the DESS post. The power relay in the rear fuseblock supplies the voltage, the ECU provides and controls the ground. Initially, the blow-by solenoid is energized by approx. 7.5V. After a few seconds, the voltage drops to around 3V, enough to keep it energized.

If the ECU loses it's ground from the OTPS, it thinks that the blow-by solenoid is not energized because there is crankcase pressure. The ECU will then try to re-energize the blow-by solenoid by controling the ground to the blow-by solenoid to allow a cycling of 7.5V down to 3V, back up to 7.5V and so on for 3 to 5 minutes. If after that time, the OTPS does not provide a ground to the ECU, fault code 1202 will activate and the engine will go into the 5000 RPM limp home mode.

In order to measure the voltage as described above, the 2-pin connector must be connected to the blow-by soleniod, and probed from the back side. If the connector is probed from the front side of the solenoid when it's disconnected, battery voltage will be read. The low voltage requires less amps and allows the solenoid to run cooler.



To recap, if the blow-by solenoid is not working, crankcase pressure builds, the OTPS will open and the ECU will lose it's ground. If after 3 to 5 minutes the ECU does not get it's ground back from the OTPS, Fault Code 1202 will be activated and the engine will go into the 5000 RPM limp home mode.

The same thing will happen if there is a problem with the wiring, connectors, or the OTPS itself that would cause the ECU to lose the ground from the OTPS circuit!

If Fault Code 1202 is Active or Occurred check the following:
-Check for Battery Voltage at the PURPLE/GREY wire going to the blow-by solenoid.
-Inspect wiring and connectors related to that circuit.
-Verify the Blow-By Solenoid is good and that the blow-by valves are lifting to uncover the ports.

You can fool the system, by disconnecting the OTPS connector and manually grounding it. If the problem (1202 code) goes away, there is an issue with the connector, or the OTPS itself (if you know for a fact no crankcase pressure is present). If the problem remains, the wiring, Kostal connector or the ECU (which is rare) is the problem.

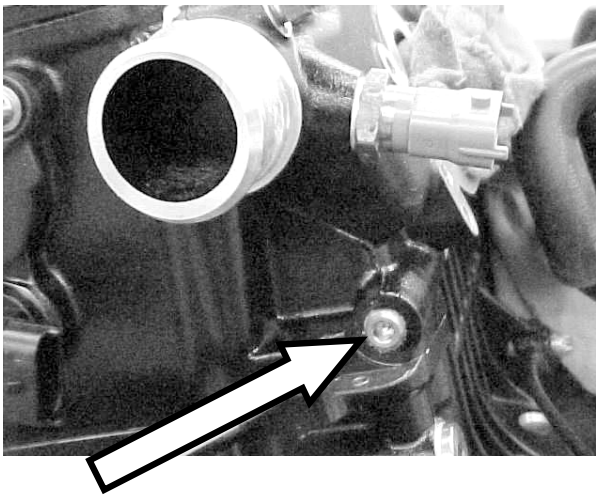
If you can duplicate the problem, and the 1202 code becomes active, carefully unthread the oil filler cap, and listen for pressure to escape. If pressure is present, there is a problem with the vent system. If no pressure if present then the wiring, connectors or the OTPS, is at fault. (rarely will the ECU be bad).

Again, this problem can be hard to duplicate. If everything checks out replace the OTPS.

4-TEC Engine: Oil Pressure Check

The procedure for checking the oil pressure in the 2003 Shop Manual is not correct.

It states to remove the plug next to the oil filter, but that plug is no longer there on MY 2003 and above engines.



There are two options:

The Oil Pressure Switch can be removed to allow the use of that hole. Note also that the Oil Pressure Switch connector must be grounded after the engine is started to allow the engine to rev above 2500 RPM's.

The oil pressure can be also checked on the head of the engine. The pressure values will be the same when the engine is **cold**, however the values will be reduced as the engine heats up because the clearance of the camshaft bearings (aluminum head) expands much more then the steel camshaft, which leads to higher oil flow.

Hot idle	20-30 PSI
Hot 4000 to 6000 RPM's	25-35 PSI

Note: At either location, a 1/8" npt pipe extension may have to be used in order to connect the pressure gauge.

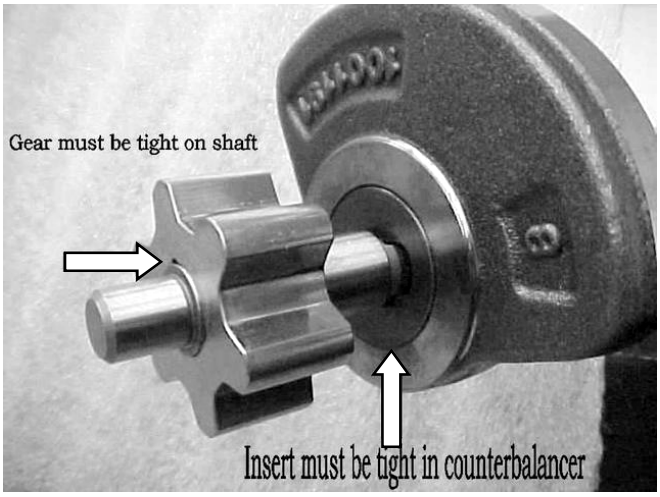
4-TEC Engine: Checking Oil & Oil Accumulating in the PTO Cover

In the past 2 years we have had some confusion regarding checking the oil and oil accumulating in the PTO cover. While we have had some failures regarding the scavenge pump, and some oil galley blockages, in most cases there is nothing wrong.

It states in the owner's guide to check the oil when the engine is warm. That's important as cold oil does not return to the oil tank as fast. Experience has told us, the best way to check the oil, is when the engine has reached operating temperature (10-15 minutes riding). That may be a little inconvenient, but unless there is an obvious problem, you may consider checking the oil at operating temps before you start troubleshooting oil accumulation in the PTO cover. Also, consider draining all the oil out of the engine, and **adding the correct amount** to be sure you have the correct amount in the engine.

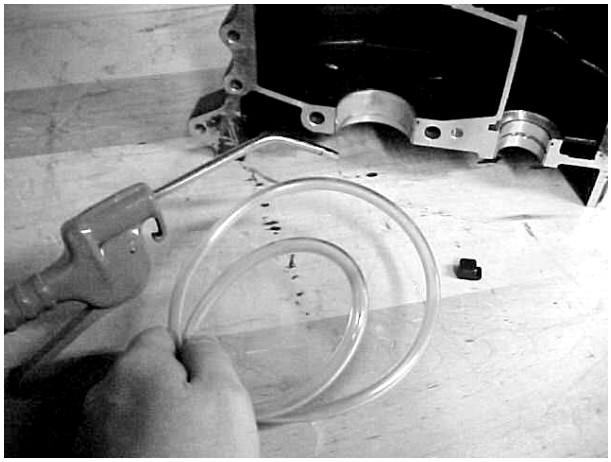
With that said, in the 2003 Sea-Doo Technical Update Book (219 700 266) we had a section on oil accumulating in the PTO cover. Refer to pages 3-5 through 3-7. It mentions reasons why oil may accumulate there, and over the past year we came across a couple more areas to check.

There is an insert pressed into the counterbalancer that drives the scavenge pump shaft assy (420 837 542) that must be checked so it does not spin inside the counterbalancer, and the gear on the pump shaft assy itself must be checked so it doesn't spin on the shaft. Even though these items must be checked, it must be noted that there was only a couple failures on each last year.



Also pictured in the 2003 Sea-Doo Technical Update Book, page 3-15 is a cam cover tab that was on all MY 2002 4-TEC and MY 2003 4-TEC's that may break off and get lodged in the return oil galley.

If you are satisfied that there is indeed a problem of oil accumulating in the PTO cover, and the scavenge pump is ok, we have successfully found a way to check the oil galley between the PTO cover and the scavenge pump and remove a blockage.



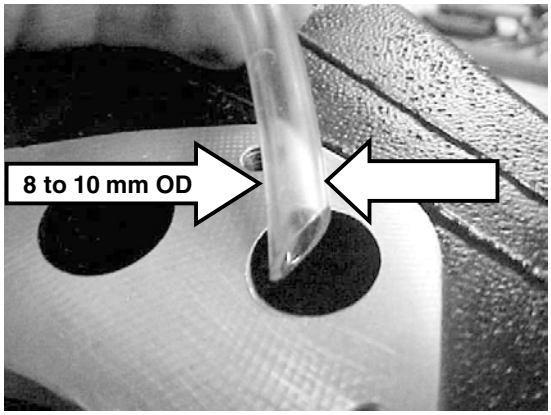
This procedure will require:

- an 8 to 10 mm o.d. fuel line (72 cm long)
- an air gun
- a 10 to 11 mm steel ball

Cut the fuel line at an angle to allow it to slide easily into the galley.

With these tools we will probe the oil passage and push any blockage out. You will have to remove the engine, PTO cover and scavenge pump.

Locate the lower oil galley hole going to the scavenge pump on the bottom half of the crankcase on the front of the engine. Introduce the fuel line into that oil galley while blowing high pressure air through the line at the same time.

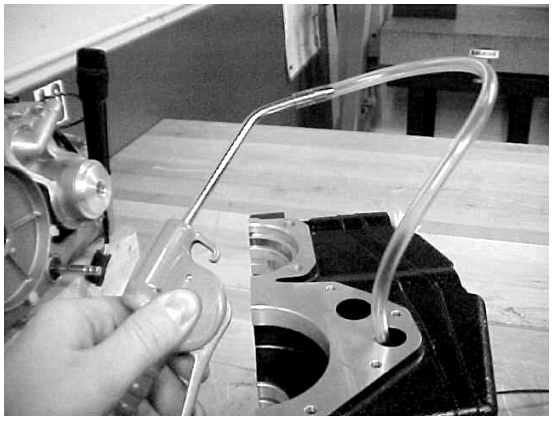


a. The air pressure will push the piece that may be blocking the galley.

b. The movement of the fuel line from side to side (caused by the air pressure that passes through it) assists in dislodging the rubber tab or other obstruction which may be blocking the passage.

c. If your air gun can not be inserted into the hose, then work the hose in as far as you can, then apply pressure.

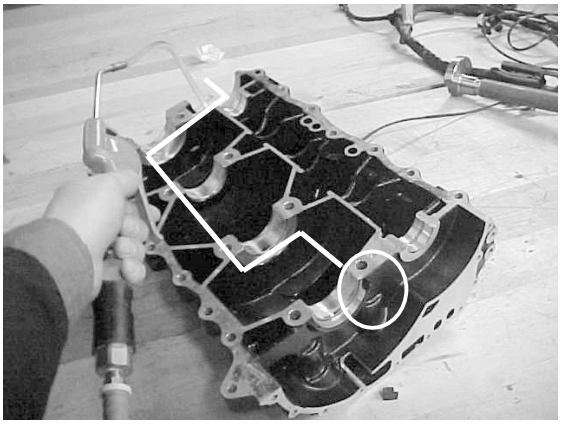
D. It is important to understand that the oil galley is not straight through the lower part of the crankcase: it curves around as shown in the drawing below. If the cam cover tab or other obstruction is in the oil galley, it will be stuck in one of the corners, and that is why we need to snake the hose through to blow it out.



The blockage may exit the passage shown here with great force. Use adequate safety protection.

To ensure the oil galley is clear, put the crankcase on end and insert a 10 to 11 mm steel ball into it. If the oil galley is clear, the steel ball will roll right through it.

The picture here is for clarity purposes. The crankcase does not have to be separated to perform this task.



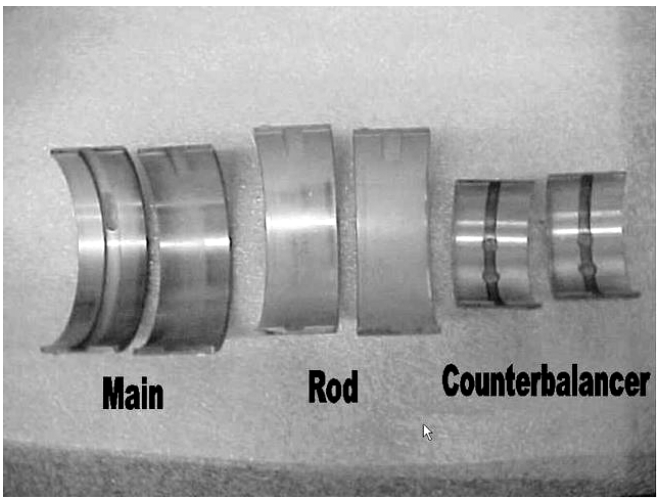
Rebuilding a 4-TEC Engine

Now that the 4-TEC engines are getting older, the opportunity to rebuild them will start to increase. Do not be afraid of this engine, as it is very easy to work on.

For example:

There are no pressed fit bearings in the crankcases with the exception of the starter drive bearing.

Insert bearings are used on the rod, main, and counterbalancer. Each has a different configuration, but each of the configurations only has one size.



- No special tools are required to remove the flywheel.
- The head can be removed as an assembly - no need to remove the cam and rocker arms.

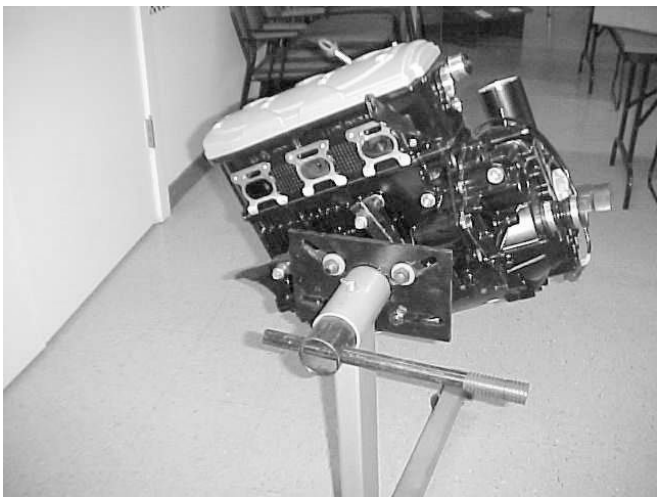
Our service dept has rebuilt several engines and we would like to give you some helpful tips when performing this procedure. The first thing that should be done is watch Technical DVD 1 (P/N 219 700 197) which covers the 4-TEC engine. It is also very important to read through the Shop Manual before starting your project. Get yourself familiar with what your about to do.

Disassembly:

Get a stand to mount the engine on. It is much easier to work on when it's stable.

Ensure you have any special tools you need on hand.

Note: the first production of crankshaft locking tools (529035821) were made to the exact size of the hole - then a zinc coating was added. Use some emery cloth and remove this coating so it will fit in the crankcase hole.



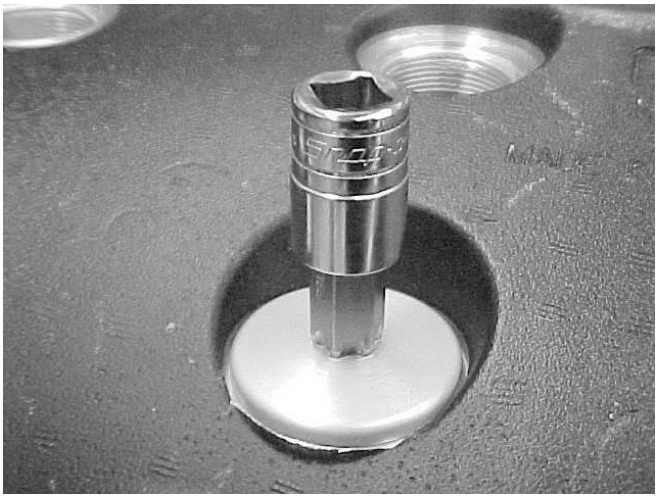
As stated before, if the head does not need to be disassembled for repairs, it can be removed as an assembly. Before removing it, stake the crankshaft and the camshaft. This makes reassembly much easier.

The 8, M30 x 1.5 plug screws used to cover the main bolts are TORX T-55.

These plug screws have Scotchgrip on them, and are sometimes hard to remove. Ensure to use a high quality T-55.

Heat may have to be used to ease removal.

Take special care when removing the encoder wheel. If the teeth are bent or damaged, there will be a CPS fault code and/or a running problem when put back together.

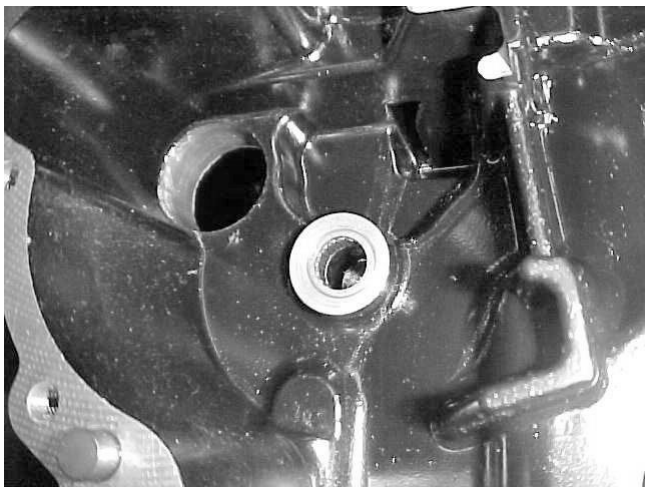


Re-assembly:

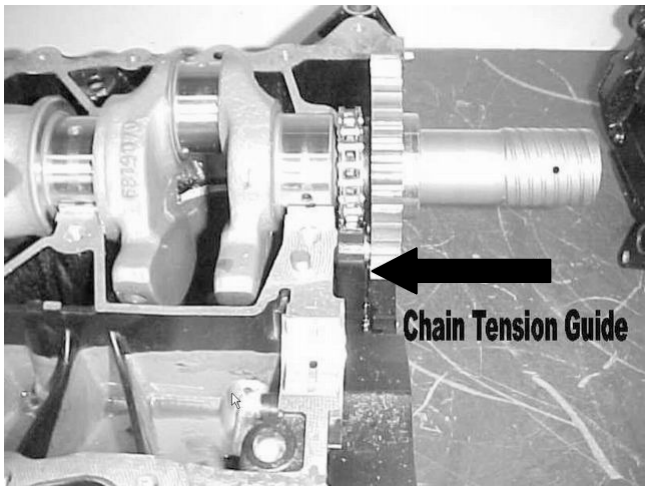
New rod stretch bolts must be used.
New rocker arm stretch bolts must be used if they were removed.

Cylinder head screws can be re-used if they are with-in the service limit of 148.5 mm.

If the crankcases are to be replaced, ensure to order a new starter drive assembly bearing (P/N 420 232 480), as it is very difficult to remove without damaging it.

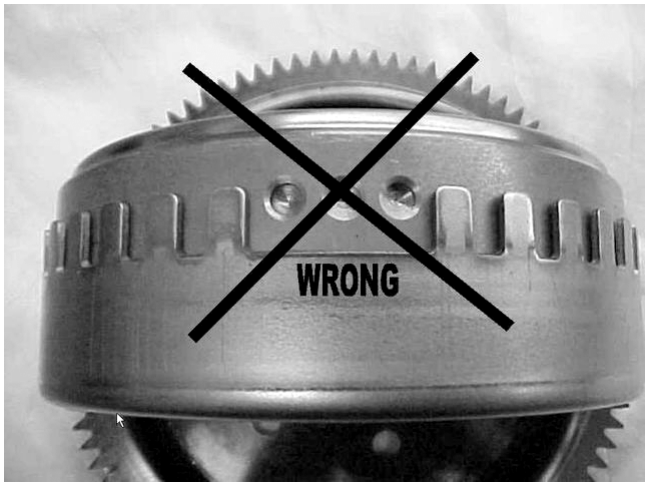


Be sure to install the cam chain tension guide on the crankcase and the cam chain around the crank gear before assembling the crankcases. If not, you will be taking them apart again

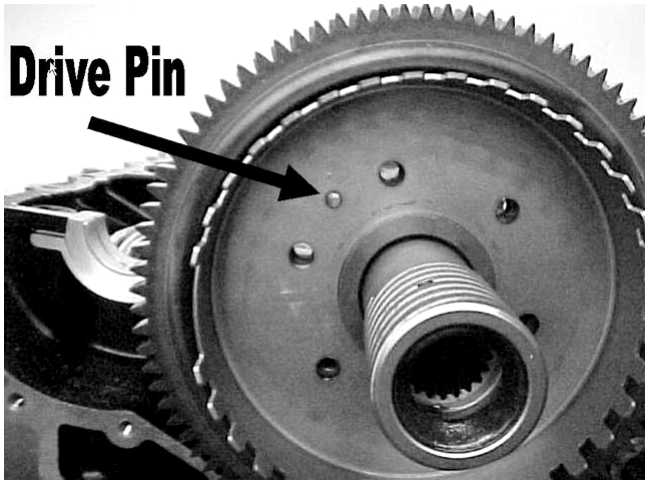


Cleanliness is vital when installing insert bearings as well as for the entire re-assembly procedure.

When installing the flywheel, ensure the balance holes are not lined up with the encoder wheel gap.



Be sure to align the encoder wheel with the drive pin on the crank gear.

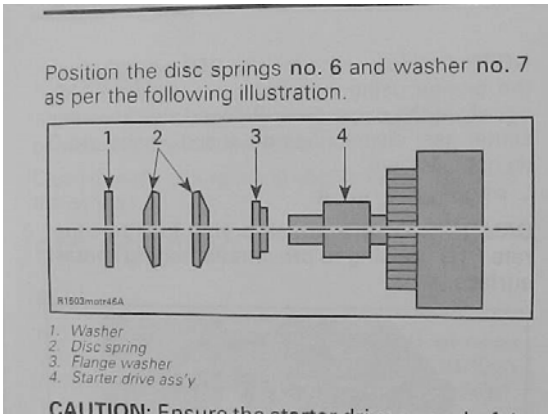


Ensure the encoder teeth are not bent.

If in doubt, insert a feeler gauge between the flywheel and the encoder teeth. The flywheel and encoder wheel teeth must be within 0.006" of one another.

Install the washers correctly on the starter drive.

Refer to the Shop Manual.

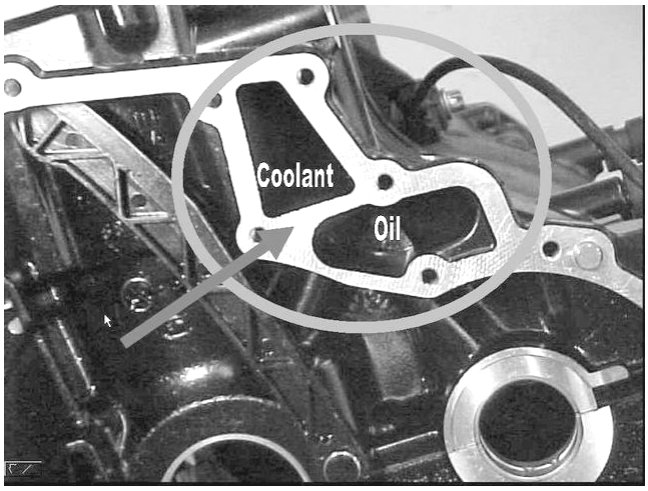


When installing the PTO cover, ensure that the gasket is positioned correctly, especially around the oil and coolant passageway areas.

The cam chain sprocket is slotted, giving you 2 possible ways of installing it due to manufacturing tolerances and chain stretch. Both ways can be correct.

Refer to page 3-11 in the 2003 technical update book (P/N 219 700 266) for a thorough explanation.

Be sure to follow all torque and sealant recommendations.



Other information:

If for any reason there are any light scuffs or scratches on the cylinder wall, don't automatically think it has to be replaced. The minimum piston/cylinder clearance is:

- 4-TEC: 0.024 - 0.056 mm (0.001 - 0.0022 in)

The service limit is 0.1 mm (0.0039 in) that means approx. 0.05 mm (0.002 in) can be honed off the cylinder wall and still be below the service limit. A good quality rigid hone with the recommended finish stone will do the job. If your shop does not have one, most machine shops do.

Valve guides are also available, so there is no need to replace the entire head if one or more guides are damaged or worn. There is a procedure in the 2003 Shop Manual on checking and/or replacing valve guides. Again, if your shop does not have the facilities to perform this job, most machine shops do.

4-TEC Engine: Oil Filter Cap

There was a running change on the oil filter cap. It has been updated from plastic to aluminum. There are no more plastic caps in stock, therefore when a cap is ordered, an aluminum cap will be received.

There are now two O-rings used on the cap instead of one

Parts Numbers:

- aluminum cap 420 610 328
- O-ring 420 230 920
  (same one as used on plastic cap)
- O-ring 420 850 500

Speedster 200 Fuel System Pressurization

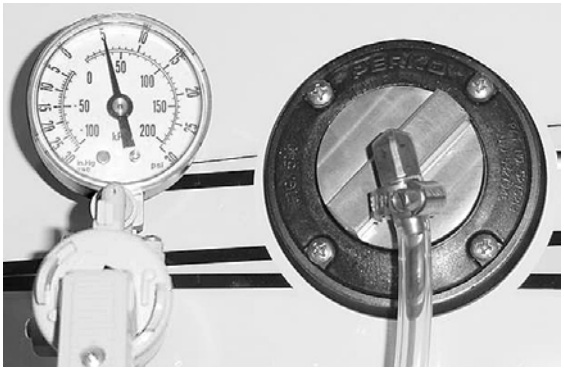
Pressure Test:

Fill up fuel tank. Remove fuel cap from chain at fuel cap end (1) **only**. Place chain in filler neck for later retrieval. Thread pressure test cap (P/N 529 035 870) into filler neck.

NOTE: It will be necessary to install the fuel system pressurization retainer (P/N 529 035 978) as shown (1) **before** performing the fuel system pressurization test.

This retaining bracket prevents the fuel pump modules from being dislodged from their respective pockets during the pressure test.

NOTE: To minimize time of fuel system pressurization, the fuel tank should be quite full. The system must maintain a pressure of 34 kPa (5 PSI) for 10 minutes. Never pressurize over 34 kPa (5 PSI).



Connect pump gauge tester to pressure test cap. Pressurize fuel system to 34 kPa (5 PSI). If pressure is not maintained, locate leak and repair/replace leaking component. To ease leak search, spray a solution of soapy water on components. Bubbles will indicate leak location. Check that leak does not come from improperly sealed hoses.

WARNING! If any leak is found, do not start the engine. Remove any fuel leakage. Failure to correct a leak could lead to an explosion. Do not use electric-powered tools on boat unless system has been verified for no leaks.

Remove pressure test cap and retrieve chainfrom filler neck. Reconnect fuel cap to chain and firmly tighten fuel cap into filler neck.

DI and DI LE Engines: Cylinders and Air Injectors

Now that the 947 DI engine has been around awhile and was updated in 2002, there's seems to be a little confusion on what parts to use.

The engines updated in 2002 were called the DI LE. However, some international MY 2002's produced did not have the new LE engine version in them. Refer to the 2002 Technical Update Book, Section 3: "What's New" (P/N 219 700 170) for this information and all the details concerning the differences between the two engines.

Note that the 2003 blue book rebuilt part numbers are incorrect for cylinders and shortblocks. The correct numbers are:

DI

- Rebuilt cylinders: 421 000 570
- Rebuilt shortblock: 421 000 572

DI LE

- Rebuilt cylinder: 421 000 205
- Rebuilt shortblock: 421 000 416

The main difference between these cylinders are:

- DI cylinders have **6** ports, DI LE cylinders have **5** ports
- the volumetric efficiency is increased and the fuel mapping is different on DI LE engines

Interchanging cylinders would have an adverse effect in the way the engine performs.

It is important to note that although the air injectors would both physically fit on either of the engines types; it is not a good idea to interchange them. The opening and closing times on the DI LE injectors are different because of their ability to react. The injecting mapping is different, and if used on DI engines they will run richer. This could foul plugs and could also cause non-compliance with the EPA.

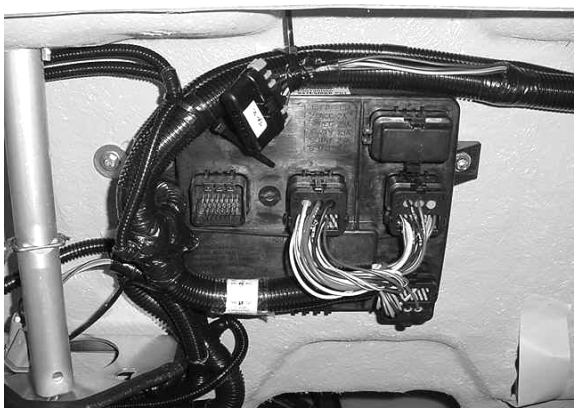
DI **DI LE**

Electrical Systems Explained

Sportster LE DI

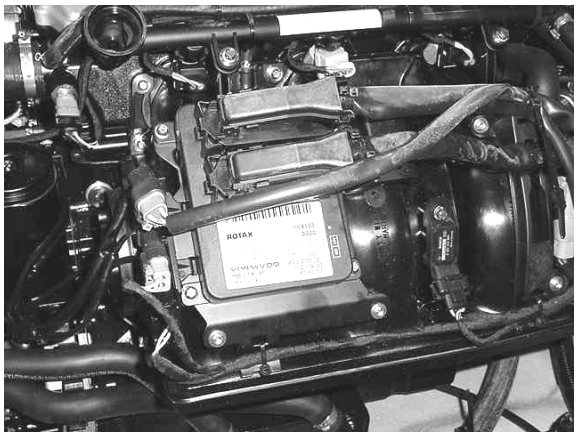
The Sportster LE DI electrical system is identical to the 2003 LRV DI electrical system with the exception of the inclusion of a neutral switch, and analog gauges, versus the LRV's info center.

The MPEM is identical in both models. The wiring diagram is included in the appendixes at the back of this book.



Speedster 200 and Sportster 4-TEC: ECU

Both the Speedster 200 and Sportster 4-TEC models are equipped with Rotax 1503 NA (normally aspirated) engines. The Sportster in a single-engine configuration and the Speedster with twin engines. Each engine, regardless of application, has its own ECU mounted to it. This ECU is identical to what is used on PWC. Therefore they have the same running parameters as the PWC line.

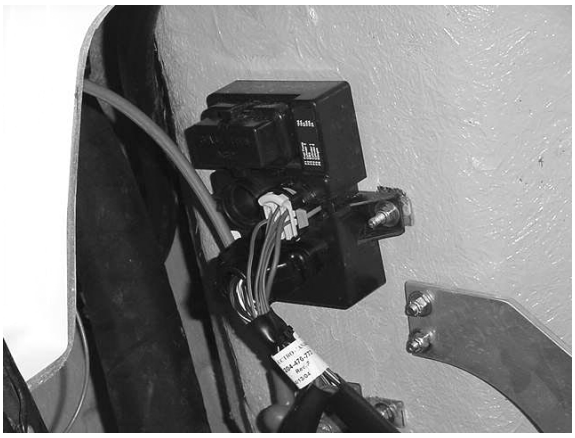


When using B.U.D.S. to access an engine's ECU, the system will tell you if it is a Sea-Doo sport boat engine or a Sea-Doo (PWC) engine. The majority of 2004 engines are designated as sport boat engines, but there some engines in both models that could be designated as Sea-Doo PWC. There is no difference in calibration or performance with these components.

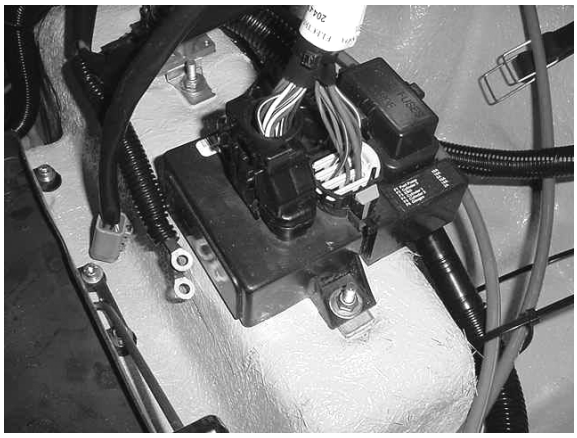
The only issue is, if you encounter one of these and do not have Sea-Doo PWC access, you will need to call the service department to obtain the access. All engine management sensors are monitored by the ECU, except the T.O.P.S., which is bypassed. The idea is that a Sea-Doo sport boat is not likely to capsize, so that function is not required.

Speedster 200 and Sportster 4-TEC: Fuseblock/Relay

When the D.E.S.S. cap is installed on the post, the magnetic switch in the post closes and energizes the relay in the fuseblock (located on the seat back on the Sportster 4-TEC, and on the stringers of the Speedster 200). This brings the entire system to life. The fuseblocks are identical in single and twin engine applications with the twin engine models using two of them. There are no electronic components in this unit, only a relay and fuses



Sportster 4-TEC



Speedster 200

Speedster 200 and Sportster 4-TEC: Gauge Interface

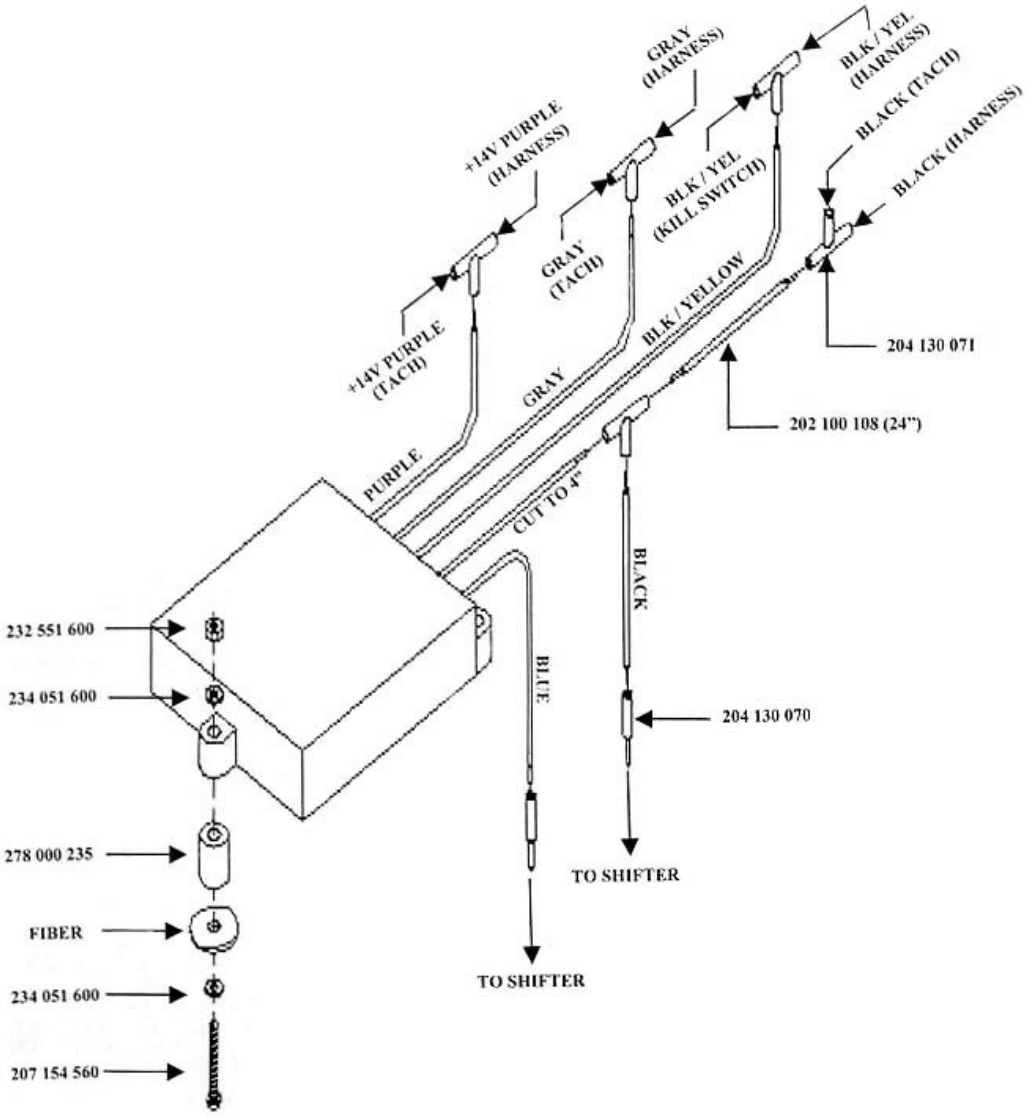
The gauge interface is located in the helm of the boat and serves several functions: the ECU sends a CAN signal to the gauges of a PWC and to the gauge interface on a Sea-Doo sport boat. This allows the use of two wires for many functions, where many more would normally be required.

Typically, a boat owner would rather see instruments with needles moving back and forth (analog) rather than LCD bar graphs (digital), so the gauge interface converts the CAN to an analog signal. Secondly, the gauge interface contains an amplifier to strengthen the D.E.S.S. signal to the ECU, and lastly to the fuses for the various functions in the helm.

The gauge interface functions are basically the same for single and twin engine applications, but they use different components. There is one interface per boat regardless if the boat is equipped with single or twin engines.

Mercury Throttle Adjustment Module

Here are some explanations about the Mercury throttle adjustment module included in kits P/N 295 500 989 and P/N 295 500 991.



This system is similar to the rev limiter we have used in previous PWC's prior to digital ignition, in that it controls RPM by momentarily grounding the ignition primary lead. The biggest difference is that it senses RPM from the tachometer (AC battery charging circuit), rather than the ignition charge coil. The module compares the AC voltage coming from the stator (tach signal) versus the switch on the throttle lever. So, if voltage (engine RPM) remains too high and the throttle switch opens (throttle lever is returned to the idle position), the engine should be limited to 3500 RPM maximum.

Here is a rundown of the wires on the module:

- BLACK - Engine ground. All grounds should attach to it, but for the module to function properly it needs at least a good engine ground.
- PURPLE - Switched power (battery voltage). Like every Sea-Doo since 1992.
- GRAY - Tachometer signal. This is AC voltage taken from the stator but connected inside (yellow to gray) the top regulator/rectifier. The stator contains 2 single phase coils (2 x 2 yellow wires) that each connect to their own regulator/rectifier on the port side of the engine. The two long yellow wires connect to the bottom reg/rect, and the two short yellow wires to the top reg/rect. Each reg/rect has a gray wire coming out of it. One has a rubber plug in the connector and the other has the tachometer lead from the wiring harness connected to it. Either gray wire could provide a signal to the tach. If the module they have just installed receives no signal from the charging system (tach), it will run for 1-3 seconds and shut the ignition down. It is possible for the tach to work even though the battery is not being charged.
- BLACK/YELLOW - Ignition circuit. This is the circuit that the module intermittently grounds and opens to regulate rpm. If there is some continuity in the key switch or lanyard switch when it should be an open circuit it could affect function of the module.
- BLUE - Throttle sensor circuit. This wire connects to the magnetic switch on the throttle control which is open when near the magnet (at idle position) and connected to ground through the black wire when away from the magnet. If the blue wire is connected to the black wire at all times, the rev limiter should not function.

. .

Troubleshooting Tips:

- Poor wire connections - Mainly grounds (ex.: Battery ground cable connection to engine).
- Magnet is installed backwards - Look at the picture in bulletins **2003-4** or **2003-5**. Rev limit function does not work.
- Wrong spark plugs - Non-resistor plugs?
- Partial continuity in key switch or lanyard switch - Erratic engagement.
- No tach signal - Find out why it is not charging. Mercury manual P/N 90-877837 has all the charging info.
- No battery voltage to the purple wire - Blown fuse in fuseblock.
- Idle too high - Goes into rev limit mode without holding throttle open. Engine idle should be checked with the boat in the water: (1000-1100 rpm).

Vinyl Cleaning Recommendations

For general purpose cleaning, use Vinyl Finish Vinyl Cleaner, Fantastik, or warm water with a mild dish soap such as Dawn or Ivory. Gently scrub with a small, soft bristle brush.

For dirt build-up, use Vinyl Finish Vinyl Cleaner or equivalent. Let soak for approximately 10 minutes, then gently scrub with a soft bristle brush. For specific stain removal, refer to your cleaning and care card.

Do not use 409 (the bottle states not to use on vinyl), kerosene, gasoline,or acetone. They will remove the protective marine top coat.

Do not use any silicone-based protectants. They will extract the plasticizers, leaving the vinyl hard and brittle, and eventually cracking will occur.

Recommended

1. Vinyl Finish Vinyl Cleaner
2. Dish Soap (Dawn, Ivory)
3. Fantastik
4. 3M Citrus Cleaner
5. 303 Protectant

Not Recommended

1. 409 (states not for use on vinyl)
2. Murphy's Soap
3. Simple Green
4. DC Plus
5. Armor All
6. Top Kote Sealant
7. Son Of A Gun
8. Orange 88 Degreaser
9. Roll Off
10. Bleach / Baking Soda
11. Turtle Wax / Tar Removal (states not for use on vinyl)
12. APCO
13. Tannery
14. Harbor Master
15. Equivalent Or Similar Products

Vinyl Cleaning Recommendations

Type of Stain	Step 1	Step 2	Step 3	Legend
Ballpoint ink *	E	B	A	**A. Medium-soft brush, warm soapy water, rinse/dry**
Chewing gum	D	A	--	
Coffee, tea, chocolate	B		--	
Crayon	D	B	--	
Grease	D	B	--	**B. Vinyl Finish Vinyl Cleaner, rinse/dry**
Household soil	A	B	--	
Ketchup	A	B	--	**C. One (1) tablespoon of ammonia, one-fourth (¼) cup hydrogen peroxide, three-fourths ¾ cup of water, rinse/dry**
Latex paint	A	B	--	
Lipstick	A	B	--	
Mildew or wet leaves *	C	B	A	
Motor oil	B		--	
Oil-based paint	D	B	--	
Permanent marker *	E	B	C	**D. Wipe or scrape off excess (chill gum with ice beforehand)**
Spray paint	B		--	
Suntan lotion	A	B	--	
Tar / Asphalt	D	B	--	
Yellow mustard	A	B	C	**E. Denatured alcohol, rinse/dry**

All cleaning methods must be followed by a thorough rinse with warm water.

* Suntan lotion, tree pollen, wet leaves and some other products can contain dyes that stain permanently.

Certain household cleaners, powdered abrasives, steel wool, and industrial cleaners can cause damage and discoloration and are not recommended. Dry cleaning fluids and lacquer solvents should not be used as they will remove printed pattern and gloss. Waxes should be used with caution as many contain dyes or solvents that can permanently damage the protective coating.

Please contact G&T Industries' Marine Specialties Group hot line at (800) 318-2887 for any cleaning and care questions.

Past Years Technical Update Book P/N's

We currently have in stock the 2002 and 2003 Sea-Doo Technical Update Books. Since we refer you back to them several times in this update book, if you need to order them, here are the part numbers.

2002 Technical Update Book: P/N 219 700 170
2003 Technical Update Book: P/N 219 700 266

B.U.D.S. USB Adaptor

Some new computers no longer have com ports, yet that is what connection is required when connecting the B.U.D.S. V.C.K. to your computer.

We have successfully found an adapter that will plug into the USB port: F5U109 BELKINS.

It is the only one we can recommend.

As usual, if there are any questions with this, or any other computer-related problem regarding our systems, please call the BOSSWeb help desk.

F5U109 BELKINS

DI & 4-TEC Fuel Filters

We now stock the fuel filter that is on the bottom of the DI and 4-TEC fuel pumps.

This filter is the same for both pumps. The old filter is easily pried off, and the new one can be pressed back on by hand. Ensure it is fully seated for complete fuel filtering.

- P/N 219 700 368

Mercury Exhaust Hoses

If a Mercury-powered boat is found to have exhaust hoses melted through near the expansion chamber outlets, it is recommended that the hoses be updated with the new sleeves that are currently being used in production.

For the Islandia, the hoses will need to be replaced with kit **P/N 295 500 992** or use component parts from the 2004 Islandia parts catalog.

For all other Mercury-powered boats, use kit **P/N 295 500 990**.

Depending on the condition of the hoses, it may not be necessary to replace the entire hose. Follow the instructions in bulletins **2003-4**, or **2003-5** for kit installation.

It is important to try to find what caused the hoses to melt. The cooling system could have been restricted by debris prior to hose failure.

SECTION

4

2004 Technical Update Special Tools

In Section 4 you will find the most current special tools information to efficiently service BRP Products.

New tool for the 2004, 4-TEC models

Bearing pusher (MANDATORY)

P/N 529 035 955

Application:
For impeller shaft removal and bearing installation.

New tool for the 2003-4, 4-TEC models

DESS adapter (OPTIONAL)

P/N 278 001 978

Application:
To communicate with the BUDS system without using the DESS post.

New tool for various models

Fuel system pressure test cap (MANDATORY).

P/N 529 035 870

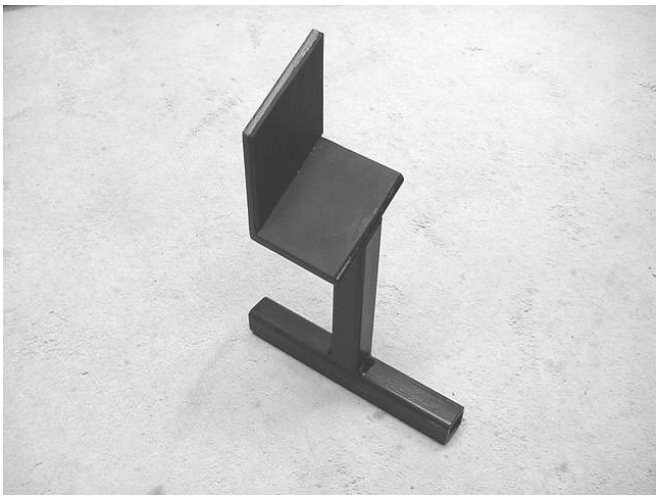
Application:
To allow pressurization of most fuel systems (tool will be autoshipped when available).

New tool for the 2003-4 Speedster 200 models

Fuel system pressure retaining bracket (MANDATORY).

P/N 529 035 978

Application:
To retain fuel pump modules in their tank pockets during fuel system pressurization (tool has been autoshipped).



SECTION

5

2004 Technical Update Specifications

In Section 5 you will find the most important specifications concerning the 2004 line-up.

SPORTSTER LE™ DI

KEY FEATURES

BUILT-IN COOLER
REAR-FACING OBSERVER SEAT
NON-SLIP GRAB HANDLES
ADJUSTABLE MIRRORS
NON-SKID DECKING
SKI STORAGE
SKI PYLON
SWIM PLATFORM

ADDITIONAL SAFETY & CONVENIENCE FEATURES

Padded/Bolstered Seating
Four Bow and Stern Cleats
Non-Skid Decking
Trailer, Custom-Matched
Mooring Cover (Opt.)
Full Instrumentation
Non-Slip Grab Handles
Navigational Lights
Auto Bilge Pump/Switch
Blower
Foam Flotation
Operator's Guide
Limited Warranty
Retail Financing Available

DIMENSIONS
Overall length.....14'6"/4.42 m
Beam.....7'1"/2.16 m
Draft.....12"/30.5 cm
Deadrise.....20°
Weight (dry).....1,235 lbs./560 kg
Passenger capacity.....4 person
Load limit.....715 lbs./325 kg
Fuel capacity.....22 US gal./83L
Oil capacity.....2.3 US gal./8.7 L
Engine.....130 hp 947 Rotax® direct injection engine

ENGINE
Type/displacement horsepower
.....2 cylinder, 130 hp
Fuel system
.....Orbital Drect Injection
Lubrication
.....Variable ratio oil injection
Exhaust
.....Water-cooled/water-injected
Engine protection systems
.....RPM limiter, overheat warning device
Max RPM
.....130 hp 947 Rotax, 6,850
Corrosion protection
.....Sacrificial zinc anodes

DRIVE UNIT
Jet pump type
.....Axial flow, single-stage
Directional gate
.....High-thrust, reverse gate, F/N/R
Impeller
.....Stainless steel progressive pitch
Intake grate
.....Weed-free shaft

ELECTRICAL
Starter
.....Electric with D.E.S.S. (Digital Encoded Security System)
Battery
.....12 volt

TRUNK STORAGE

SWIM PLATFORM

BUILT-IN COOLER

SPORTSTER™ 4-TEC™

SPORTSTER 4-TEC • SPORTSTER 4-TEC W/TOWER

KEY FEATURES

NON-SKID BOW ENTRY

BUILT-IN COOLER

ON-BOARD STORAGE

REAR-FACING OBSERVER SEAT

SKI STORAGE

AM/FM STEREO W/CD PLAYER

SKI PYLON

12 VOLT JACK

SWIM PLATFORM W/LADDER

ADDITIONAL SAFETY & CONVENIENCE FEATURES

Padded/Bolstered Seating

Sun Deck Cushion

Four Stainless Steel Cleats

Trailer, Custom-Matched Mooring Cover (Opt.)

Full Instrumentation

Non-Skid Decking

Non-Slip Grab Handles

Windscreen

Navigational Lights

Auto Bilge Pump/Switch

Blower

Foam Flotation

Operator's Guide

Limited Warranty

Retail Financing Available

DIMENSIONS

Overall length.....154"/4.67 m

Beam.....71"/2.16 m

Draft.....12"/30.5 cm

Deadrise.....20°

Weight (dry).....1,454 lbs./660 kg

Passenger capacity.....4 person

Load limit.....715 lbs./325 kg

Fuel capacity.....23 US gal./87 L

Oil capacity.....3.5 L

Engine.....155 hp Rotax® 4-TEC™ engine

ENGINE

Type/displacement horsepower

....3 Cylinder/1494 cc, 155 hp

Fuel system

....MPI fuel injection

Lubrication

....Dry sump oil system

Exhaust

....Dual muffler

Engine protection systems

....RPM Limiter, low oil, overheat warning device, low voltage, check engine

Max RPM

....155 hp Rotax® 4-TEC, 7,300

Corrosion protection

....Closed loop engine cooling system

DRIVE UNIT

Jet pump type

....Axial flow, single-stage

Directional gate

....High-thrust, reverse gate, F/N/R

Impeller

....Stainless steel progressive pitch

ELECTRICAL

Generator

.....30 Amp / 380 W

Starter

....Electric with D.E.S.S. (Digitally Encoded Security System)

Battery

....12 volt

PERFORMANCE HELM

REAR SUN DECK/STORAGE

SKI STORAGE

SPEEDSTER® 200

KEY FEATURES

ON-BOARD STORAGE

GRAB HANDLES

BUILT-IN ICE CHEST

WINDSCREEN W/POP-UP
WIND DEFLECTOR AND HELM STORAGE

MULTI-FUNCTION ALUMINUM RAILS

AM/FM CD STEREO
W/4 SPEAKERS

12 VOLT JACK

SKI STORAGE

COCKPIT COURTESY LIGHTS

SKI PYLON

SUN DECK PAD

DUAL ACCESS REAR
STORAGE COMPARTMENT

SWIM PLATFORM W/LADDER

ADDITIONAL SAFETY & CONVENIENCE FEATURES

One-Touch Inlet Clearance System

Padded/Bolstered Seating

Stainless Steel Eyes Bow and Stern

Six Stainless Steel Cleats

Driver/Passenger Console

Glove Compartment

Trailer, Custom-Matched (Galvanized Opt.)

Full Instrumentation

Non-Skid Decking

12 Volt Jack

Non-Slip Grab Handles

Navigational Lights

Horn (Flush Mount)

Bimini Top (Opt.)

Mooring Cover (Opt.)

Cockpit Carpet (Opt.)

Auto Bilge Pump/Switch

Operator's Guide

Limited Warranty

Retail Financing Available

DIMENSIONS
Overall length.....19'9"/6.02 m
Beam.....8'0"/2.44 cm
Draft.....12"/30.5 cm
Deadrise.....20°
Weight (dry).....2,770 lbs./1,256 kg
Passenger capacity.....7 person
Load limit.....1400 lbs./635 kg
Storage capacity.....46 cu.ft/1.30 cu.m
Fuel capacity.....40 US gal/151 L
Oil capacity.....3.5 L per engine

ENGINE
Model
.....Twin Rotax® 4-TEC™
Displacement
.....2,996 cc (1,498 per engine)
Horsepower
.....310 hp (155 per engine)
Type
.....4 stroke
Cylinders
.....6 (3 per engine)
Max RPM
.....7,300
Exhaust
.....Dual Mufflers
Engine protection systems
.....Overheat warning device, RPM limiter, low oil, low voltage, check engine

DRIVE UNIT
Jet pump type
.....Axial flow, single-stage
Directional gate
.....High-thrust, reverse gate, F/N/R
Impeller
.....Stainless steel, progressive pitch
Intake grate
.....Inlet Clearance System
Pump diameter
.....6.10"/155 mm (2X)

ELECTRICAL
Starter
.....Electric with D.E.S.S. (Digitally Encoded Security System)
Generator
.....30 Amp/380 W
Battery
.....12 volt

MECHANICAL
.....Main battery cutoff switch

ANALOG GAUGES
.....Speedometer backlit
.....Tachometer backlit (2X)
.....Fuel/oil gauge backlit
.....Warning backlit

PERFORMANCE HELM

SKI STORAGE

REAR SUN DECK/STORAGE

CHALLENGER™ X

KEY FEATURES

WIDE-ANGLE ADJUSTABLE MIRROR
ON-BOARD STORAGE
WINDSCREEN W/POP-UP WIND DEFLECTOR AND HELM STORAGE
BUILT-IN COOLER
AM/FM STEREO W/CD PLAYER
COCKPIT COURTESY LIGHTS
TWO-PART QUICK RELEASE WAKEBOARD TOWER w/7' TOW POINT
600 LB. MID SHIP FAT SAC w/PUMP
SUN DECK CUSHION
ON-BOARD STORAGE
SWIM PLATFORM w/LADDER

ADDITIONAL SAFETY & CONVENIENCE FEATURES

Padded/Bolstered Seating
Control Steering System
Six Stainless Steel Cleats
Glove Compartment
12 Volt Jack
Foam Flotation
Trailer, Custom-Matched Mooring Cover (Opt.)
Full Instrumentation
Non-Skid Decking
Non-Slip Grab Handles
Horn (Flush Mount)
Navigational Lights
Auto Bilge Pump/Switch
Blower
Operator's Guide
Limited Warranty
Retail Financing Available

DIMENSIONS

Overall length.....19'8"/6.00 m
Beam.....8'0"/2.44 m
Draft.....12"/30.5 cm
Deadrise.....20°
Weight (dry).....2,200 lbs./998 kg
Passenger capacity.....8 person
Load limit.....1,440 lbs./653 kg
Fuel capacity.....40 US gal./151 L
Oil capacity.....3 US gal./11.4 L
Engine.....250 hp OptiMax† Mercury M² Jet Drive

ENGINE

Type/displacement horsepower
.....V6/3.0 L 250 hp OptiMax
Fuel system
.....250 hp OptiMax 2-stage dir. injection
Lubrication
.....Variable ratio oil injection, gear-driven
Exhaust
.....Power-tuned dual muffler, through-transom
Engine protection systems
.....Engine overheat, low oil level, over-rev protection, low battery
Max RPM
.....250 hp OptiMax, 5,650
Corrosion protection
.....XK360 aluminum, multi-step painting, sacrificial anodes

DRIVE UNIT

Jet pump type
.....Mixed flow, high-volume
Directional gate
.....High-thrust, twin aperture, F/N/R
Impeller
.....7.25" diameter, 4-blade variable pitch stainless steel
Trim system
.....Manual adjustable trim plate
Intake grate
.....™Hydro-Surge™ weedless

ELECTRICAL

Starter
.....Electric
Charging system
.....250 hp OptiMax = 60 amp
Battery
.....12 volt

PERFORMANCE HELM

600 LB. FAT SAC W/PUMP

COLLAPSIBLE TOWER

UTOPIA™ 185

KEY FEATURES

ABUNDANT ON-BOARD STORAGE

FULL WINDSHIELD

COCKPIT COURTESY LIGHTS

AM/FM STEREO W/CD PLAYER

BUCKET AND BUDDY SEAT COMBINATION

SKI STORAGE

SUN DECK CUSHION

BIMINI TOP (STD.) STORED IN TRUNK

CHANGING ROOM W/TOILET (OPT.)

SWIM PLATFORM W/LADDER

ADDITIONAL SAFETY & CONVENIENCE FEATURES

Padded/Bolstered Seating

Control Steering System

Six Stainless Steel Cleats

Glove Compartment

12 Volt Jack

Limited Warranty

Trailer, Custom-Matched Mooring Cover (Opt.)

Full Instrumentation

Non-Skid Decking

Non-Slip Grab Handles

Horn (Flush Mount)

Navigational Lights

Auto Bilge Pump/Switch

Blower

Foam Flotation

Operator's Guide

Retail Financing Available

DIMENSIONS

Overall length.....18'3"/5.56 m

Beam.....8'0"/2.44 m

Draft.....12"/30.5 cm

Deadrise.....20°

Weight (dry).....2,110 lbs./957 kg

Passenger capacity.....8 person

Load limit.....1,320 lbs./599 kg

Fuel capacity.....40 US gal./151 L

Oil capacity.....3 US gal./11.4 L

Engine (options)

.....200 hp OptiMax† Mercury† M² Jet Drive

.....240 hp EFI Mercury M² Jet Drive

ENGINE

Type/displacement horsepower

.....V6/2.5 L 200 hp OptiMax

.....V6/2.5 L 240 hp EFI

Fuel system

.....200 hp OptiMax 2-stage dir. injection

.....240 hp EFI Multi-point injection

Lubrication

.....Variable ratio oil injection, gear-driven

Exhaust

.....Power-tuned dual muffler, through-transom

Engine protection systems

.....Engine overheat, low oil level, over-rev protection, low battery

Max RPM

.....200 hp OptiMax, 5,650

.....240 hp EFI, 6,000

Corrosion protection

.....XK360 aluminum, multi-step painting, sacrificial anodes

DRIVE UNIT

Jet pump type

.....Mixed flow, high-volume

Directional gate

.....High-thrust, twin aperture, F/N/R

Impeller

.....7.25" diameter 4-blade variable pitch stainless steel

Trim system

.....Manual adjustable trim plate

Intake grate

.....“Hydro-Surge” weedless

ELECTRICAL

Starter

.....Electric

Charging system

.....200 hp OptiMax = 60 amp

.....240 hp EFI = 40 amp

Battery

.....12 volt

†Mercury M² Jet Drive and OptiMax are registered trademarks of the Brunswick Corporation.

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SWIVEL BUDDY SEAT

WALK-THROUGH WINDSHIELD

BOW STORAGE

UTOPIA™ 205

KEY FEATURES

ABUNDANT ON-BOARD STORAGE
FULL WINDSHIELD
COCKPIT COURTESY LIGHTS
BUCKET SEAT AND BUDDY SEAT COMBINATION
AM/FM STEREO W/CD PLAYER
REMOVABLE COCKPIT TABLE (STD.)
SKI STORAGE
SUN DECK CUSHION
CHANGING ROOM W/TOILET (OPT.)
BIMINI TOP (STD.) STORED IN TRUNK
SWIM PLATFORM W/LADDER

ADDITIONAL SAFETY & CONVENIENCE FEATURES

Padded/Bolstered Seating
Control Steering System
Six Stainless Steel Cleats
Glove Compartment
12 Volt Jack
Foam Flotation
Trailer, Custom-Matched Mooring Cover (Opt.)
Full Instrumentation
Non-Skid Decking
Blower
Non-Slip Grab Handles
Horn (Flush Mount)
Navigational Lights
Limited Warranty
Auto Bilge Pump/Switch
Operator's Guide
Retail Financing Available

PERFORMANCE HELM

REAR SEAT STORAGE

STORAGE & OPTIONAL HEAD

DIMENSIONS

Overall length.....19'5"/5.91 m
Beam.....8'0"/2.44 m
Draft.....12"/30.5 cm
Deadrise.....20°
Weight (dry).....2,330 lbs./1,057 kg
Passenger capacity.....8 person
Load limit.....1,320 lbs./599 kg
Fuel capacity.....40 US gal./151 L
Oil capacity.....3 US gal./11.4 L
Engine (options)
.....200 hp OptiMax[1] Mercury[1] M[2] Jet Drive
.....240 hp EFI Mercury M[2] Jet Drive
.....250 hp OptiMax Mercury M[2] Jet Drive

ENGINE

Type/displacement horsepower
.....V6/2.5 L 200 hp OptiMax
.....V6/2.5 L 240 hp EFI
.....V6/3.0 L 250 hp OptiMax
Fuel system
.....200 hp OptiMax 2-stage dir. injection
.....240 hp EFI Multi-point injection
.....250 hp OptiMax 2-stage dir. injection
Lubrication
.....Variable ratio oil injection, gear-driven
Exhaust
.....Power-tuned dual muffler, through-transom
Engine protection systems
.....Engine overheat, low oil level, over-rev protection, low battery
Max RPM
.....200 hp OptiMax, 5,650
.....240 hp EFI, 6,000
.....250 hp OptiMax, 5,650
Corrosion protection
.....XK360 aluminum, multi-step painting, sacrificial anodes

DRIVE UNIT

Jet pump type
.....Mixed flow, high-volume
Directional gate
.....High-thrust, twin aperture, F/N/R
Impeller
.....7.25" diameter, 4-blade variable pitch stainless steel
Trim system
.....Manual adjustable trim plate
Intake grate
.....“Hydro-Surge” weedless

ELECTRICAL

Starter
.....Electric
Charging system
.....200 hp OptiMax = 60 amp
.....240 hp EFI = 40 amp
.....250 hp OptiMax = 60 amp
Battery
.....12 volt

[1]Marcury M[2] Jet Drive and OptiMax are registered trademarks of the Brunswick Corporation.

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ISLANDIA™

KEY FEATURES

FRONT BOARDING PLATFORM W/LADDER

CONTROL STEERING SYSTEM

ABUNDANT ON-BOARD STORAGE

KIDDIE POOL IN BOW

CHANGING ROOM W/TOILET

CONVENIENCE CENTER W/BUILT-IN COOLER

AM/FM STEREO W/CD PLAYER

FRESHWATER SHOWER

REAR SEATING CONVERTS TO SUN PAD

BIMINI TOP (STD.)

REAR BOARDING PLATFORM W/LADDER

ADDITIONAL SAFETY & CONVENIENCE FEATURES

- Front Cockpit Table
- Sun Deck Cushion
- Cockpit Courtesy Lights
- Docking Lights
- Full Instrumentation
- Ski Storage
- Six Stainless Steel Cleats
- Glove Compartment
- 12 Volt Jack
- Ski Tow Hook
- Trailer, Custom-Matched Non-Skid Decking
- Non-Slip Grab Handles
- Windscreen/Windshield
- Horn (Flush Mount)
- Navigational Lights
- Auto Bilge Pump/Switch Blower
- Foam Flotation
- Mooring Cover (Opt.)
- Bow Filler Cushion (Opt.)
- Rear Cockpit Table Kit (Opt.)
- Operator's Guide
- Limited Warranty
- Retail Financing Available

CHANGING STATION

CONVENIENCE CENTER

RECLINING SEATS & SUN PAD

DIMENSIONS

Overall length.....22'0"/6.7 m
Beam.....8'3"/2.52 m
Draft.....12"/30.5 cm
Deadrise.....16°
Weight (dry).....3,050 lbs./1,383 kg
Passenger capacity.....12 person
Load limit.....1,800 lbs./816 kg
Fuel capacity.....55 US gal./208 L
Water capacity.....20 US gal./76 L
Oil capacity.....3 US gal./11.4 L
Engine.....240 hp EFI Mercury® M² Jet Drive
.....250 hp OptiMax® Mercury M² Jet Drive

ENGINE

Type/displacement horsepower
....V6/2.5 L 240 hp EFI
....V6/3.0 L 250 hp OptiMax
Fuel system
....240 hp EFI Multi-point injection
....250 hp OptiMax 2-stage dir. injection
Lubrication
....Variable ratio oil injection, gear-driven
Exhaust
....Power-tuned dual muffler, through-transom
Engine protection systems
....Engine overheat, low oil level, over-rev protection, low battery
Max RPM
....240 hp EFI, 6,000
....250 hp OptiMax, 5,650
Corrosion protection
....XK360 aluminum, multi-step painting, sacrificial anodes

DRIVE UNIT

Jet pump type
....Mixed flow, high-volume
Directional gate
....High-thrust, twin aperture, F/N/R
Impeller
....7.25" diameter, 4-blade variable pitch stainless steel
Trim system
....Manual adjustable trim plate
Intake grate
....“Hydro-Surge” weedless

ELECTRICAL

Starter
....Electric
Charging system
....240 hp EFI = 40 amp
....250 hp OptiMax = 60 amp
Battery
....12 volt

Annexes

2004 Technical Update

REPORT ON PEFORMANCE/QUALITY (FROM DEALER)

Please Check Here Properly Box ☐ ***SEA-DOO*** ☐ ***SPORT BOAT***

N.B. If fields with grey headings are not completed, the report **can not be processed!**

DATE (YEAR-MONTH-DAY)	REPORTED BY	DEALER'S NUMBER (999999)	CONTACT
	First Name: Last Name:		First Name: Last Name:

CIRCLE THE APPLICABLE CONDITION

ENVIRONEMENT

1.1 During PDI
1.2 Freight Damage
1.3 High Sea
1.4 Lake
1.5 River/Channel
1.6 During Storage
N.A.*

TYPE OF USAGE

2.1 Fresh Water
2.2 Salt Water
N.A.*

TYPE OF USAGE

3.1 Personal
3.2 Rental
3.3 Commercial
3.4 Racing
N.A.*

WATER CONDITION

4.1 High Waves
4.2 Shallow Water
4.3 Calm Water
N.A.*

THROTTLE OPENING

1/4
1/2
3/4
4/4
N.A.*

CIRCLE THE APPLICABLE SYSTEM

N.A. if not applicable

01 Engine
02 Fuel System and Fuel Tank/ Oil System
03 Exhaust System
04 Electrical System/Electrical Starter/Engine Ignition
05 Propulsion
07 Steering System
08 Suspension
09 Body
10 Crate/Accessories/ Special Tools
11 N.A.
118 Multiple System

OUTSIDE TEMPERATURE	WATER TEMPERATURE	SPEED
Unité de mesure ☐ F ☐ C	Select Measure ☐ F ☐ C	Select Measure ☐ km/h ☐ MPH

MODEL NUMBER (9999)	SERIAL NUMBER	☐ ZZN ☐ CEC	TOTAL HOURS USED	RPM	PART NUMBER (999 999 999)
					- -

PROBLEM DESCRIPTION

CORRECTIVE ACTION TAKEN

COMMENTS/OTHER OBSERVATIONS

N.A.* Infos Unavailable

Bombardier Oils & Lubricants

(This is only a partial listing to use as a quick reference sheet.)

Part #	Product Description	Size	Application			Notes
			Ski-Doo	Sea-Doo	ATV	
293600011	Bombardier Synthetic Jet Pump Oil	177 ml (6 oz)	-	X	-	
293600043	Bombardier Synthetic Gear Oil 75w 90	946 ml (32 oz)	-	-	X	Same as 293 600 011 but 946 ml
413801900	Bombardier Chaincase Oil	250 ml (8.4 oz)	X	-	X	
413803300	Bombardier Synthetic Chaincase Oil	355 ml (12 oz)	X	-	X	
413711600	Bombardier Storage oil	Spray 473 ml (16 oz)	X	X	X	
413408600	Bombardier Fuel Stabilizer	236 ml (8 oz)	X	X	X	
293600016	Bombardier Lube	Spray 473 ml (16 oz)	X	X	X	
413802900	Bombardier 2-stroke Injection Oil	1 liter (33.8 oz)	X	X	X	Exc.Models that require FORMULA XP-S or FORMULA XP-S DI ATV : Mini DS 2-stroke only
413803000	Bombardier 2-stroke Injection Oil	4 liter (135 oz)	X	X	X	
413803200	Bombardier 2-stroke Injection Oil	Drum 205 L (54 gallons)	X	X	X	
293600045	NEW FORMULA XP-S II Synthetic 2-stroke Oil	1 liter (33.8 oz)	X	X	X	Replaces both FORMULA XP-S and FORMULA XP-S DI ATV : Mini DS 2-stroke only
293600046	NEW FORMULA XP-S II Synthetic 2-stroke Oil	4 liter (135 oz)	X	X	X	
293600047	NEW FORMULA XP-S II Synthetic 2-stroke Oil	Drum 205 L (54 gallons)	X	X	X	
413803100	Bombardier Premix oil	500 ml (17 oz)	X	X	X	2 stroke
293600039	Bombardier Synthetic 4-stroke Oil 5W40	1 liter (33.8 oz)	-	-	X	
293600054	Bombardier Synthetic 4-stroke Oil 0W-40	1 liter (33.8 oz)	X	-	-	

REBUILT PARTS LIST SEA-DOO – SKI-DOO – ATV

PRODUCT	REBUILT PART	PART	ENGINE TYPE	COOLING SYSTEM F/C - L/C	AMOUNT CYL.	YEAR	DESCRIPTION	Original Part #
Ski / Sea-Doo	421000051	REP		L/C		N/A	Resleeve cylinder, repair only	N/A
Ski / Sea-Doo	421000060	REP				N/A	Crankcase brass plate insert, repair only	N/A
Ski / Sea-Doo	421000062	REP				N/A	Rotary valve cover refacing, repair only	N/A
Ski / Sea-Doo	421000063	REP				N/A	Oversized cylinder, repair only	N/A
Ski / Sea-Doo	421000050	REP		F/C		N/A	Resleeve cylinder, repair only	N/A
SKI-DOO	421000031	CRANKSHAFT	277	F/C	1	1993 to 2004		420995301
	421000009		377 - 443	F/C	2	1992 to 1996		420887245 / 420996332
	421000154		377 - 443	F/C	2	1997 to 2004		420889630
	421000150		454	L/C	2	1995 to 1998		420887962 / 420887966
	421000574		693	L/C	2	2000 TO 2002	27 mm	420888286
	421000573		793	L/C	2	2000 TO 2002		420888402
	421000019		467	L/C	2	1985 to 1995		420995205
	421000151		494	L/C	2	1996 to 2000		420886933
	421000567		493	F/C	2	2000		420888462
	421000011		503	F/C	2	1990 to 1996	Keyway at 3 o'clock	420996445
	421000155		503	F/C	2	1997 to 2003		420888390 / 420888391
	421 000 601		552	F/C	2	2003 to 2004		420 889 062
	421000021		532-536-537-582	L/C	2	1985 to 1996		420996628
			583			1990 to 1993		
	421000044		583	L/C	2	1994 to 1999		420 887 355
	421000563		593	L/C	2	2000 to 2002		420888252 / 420888751
	421000553		593	L/C	2	1999		420888250
	421000023		643	L/C	2	1991 & 1992		420996625
	421000025		670	L/C	2	1993 & 1994	Order needle bearing # 420 832 425	420886425
	421000046		670	L/C	2	1995 & 1996	Order needle bearing # 420 832 425	420887987
						1997 to 1999		
	421000312		670	L/C	2	1998 & 1999	Summit X & MXZ H.O.	420887986
	421000047		599	L/C	3	1995		420886903
	421000152		599	L/C	3	1996 & 1997		420887970
	421000310		599 - 699 CK3	L/C	3	1998 to 2000	New modified part for 1999-2000	420888030 / 420888034
	421000153		699	L/C	3	1997		420887605
	421000026		779	L/C	3	1993 & 1994		420886485
	421000048		779	L/C	3	1995 & 1996		420887590
	421000156		809	L/C	3	1997 to 2003	New modified part for 1999-2002	420887667 / 420887668 420887662

PRODUCT	REBUILT PART	PART	ENGINE TYPE	COOLING SYSTEM F/C - L/C	AMOUNT CYL.	YEAR	DESCRIPTION	Original Part #
SKI-DOO	421000606	CRANKSHAFT	793SDI	L/C	2	2003-2004	SDI ONLY	420889106
	421000607		793HO	L/C	2	2003-2004	H.O. ONLY 2004 ONLY	420889671
	421000608		793	L/C	2	2003	2003 ONLY	420889101
	421000609		693 593HO	L/C	2	2003-2004	693 AND 593 HO ONLY	420889091
	421000611		593	L/C	2	2003-2004		420888757
	421000599		493	L/C	2	2003		420888465
SKI-DOO	421000101	CYLINDER	277	F/C	1	1993 to 1996		420913217
	421000200		277	F/C	1	1997 to 2004		420913218 / 420913219
	421000102		377	F/C	2	1984 to 1994	Pto	420823796
	421000103		377	F/C	2	1995 & 1996	Pto	420823799
	421000201		377	F/C	2	1997 to 1998	Pto	420-923 402
	421000104		377	F/C	2	1984 to 1994	Mag	420823805
	421000105		377	F/C	2	1995 & 1996	Mag	420823809
	421000202		377	F/C	2	1997 /1998	Mag	420923405
	421000106		443	F/C	2	1996	Pto	420923346
	421000107		443	F/C	2	1996	Mag	420923356
	421000203		443	F/C	2	1997 to 2004	Pto	420923348 / 420923790
	421000204		443	F/C	2	1997 to 2004	Mag	420923358 / 420923795
	421000559		377	F/C	2	1999 to 2004	Pto	420923403
	421000560		377	F/C	2	1999 to 2004	Mag	420923408
	421000114		467	L/C	2	1985 to 1995	Comes with 2 bolts	420823697 / 420923149
	421000113		467	L/C	2	1985 to 1995		420823699
	421000115		494	L/C	2	1996 & 1997	# 420 887 553 at 69,39 mm	420923148
	421000551		494	L/C	2	1998 to 2000	All models except Skandic	420923617
	421000552		494	L/C	2	1998 to 2000	Skandic only	420923619
	421000109		503	F/C	2	1983 to 1998		420 823 645
	421000110		503	F/C	2	1983 to 1997		420923410
	421000500		503	F/C	2	1998 to 2003		420923417
	421000600		552	F/C	2	2003 to 2004		420923975
	421000116		582	L/C	2	1993		420913449
	421000117		582	L/C	2	1994 to 1996		420913446
	421000118		583	L/C	2	1989 to 1993		420913078
	421000119		583	L/C	2	1994		420923670
	421000120		583	L/C	2	1995 to 1999		420923067
	421000554		593	L/C	2	1999 & 2002		420923435 / 420923437
	421000121		643	L/C	2	1991 & 1992		420913077
	421000123		670	L/C	2	1993 to 1999	1 exhaust pipe	420923193
	421000124		670	L/C	2	1995 & 1996	Mach 1 only	420923199
	421000568		493	L/C	2	2001 TO 2003		420923855 / 420613605
	421000578		593	L/C	2	2001 TO 2004	WITH OUT DEKO SLOTS	420923439 / 420613625
	421000550		670	L/C	2	1998 & 1999	Summit X & MXZ H.O.	420923700
	421000125		779	L/C	3	1994 to 1996		420913339

PRODUCT	REBUILT PART	PART	ENGINE TYPE	COOLING SYSTEM F/C - L/C	AMOUNT CYL.	YEAR	DESCRIPTION	Original Part #
SKI-DOO	421000558	NICASYL CYL.	693	L/C	2	2001 to 2002		420923694 / 420923692
	421000065		454	L/C	2	1995 & 1996		420923170
	421000610		454	L/C	2	1997 & 1998		420923172
	421000066		599	L/C	3	1995		420923110
	421000067		599	L/C	3	1996 to 1999		420923112
	421000555		693	L/C	2	2000	SAND CAST	420923691
	421000064		699	L/C	3	1997 to 2000		420923420
	421000068		809	L/C	3	1997 to 2003		420923480
	421000566		693	L/C	2	2001 to 2004	WITH OUT DEKO SLOTS	420923695
	421000579		793	L/C	2	2000 to 2004	WITH OUT DEKO SLOTS	420923811 / 420923817
	421000597		793	L/C	2	2002		420923810 / 420923815
	421000605		593HO	L/C	2	2003 to 2004	H.O. ONLY	420613711
	421000604		793HO	L/C	2	2003 to 2004	H.O. ONLY	420613852
SKI-DOO	421000175	SHORT BLOCK	377	F/C	2	1995 to 2002		N/A
	421000173		494	L/C	2	1996		N/A
	421000181		494	L/C	2	1997		N/A
	421000412		494	L/C	2	1998 to 2000	All models except Skandic	N/A
	421000410		503	F/C	2	1994 to 1999		N/A
	421000602		552	F/C	2	2003 to 2004		420055201
	421000182		583	L/C	2	1995 to 1997		N/A
	421000413		583	L/C	2	1998 & 1999		N/A
	421000180		670	L/C	2	1997		N/A
	421000414		670	L/C	2	1998 & 1999	1 exhaust pipe	N/A
	421000415		670	L/C	2	1998 & 1999	Summit X & MXZ H.O.	N/A
	421000575		493	L/C	2	2000 TO 2002		420049302
	421000581		593	L/C	2	2001 - 2002		420049302
	421000581		593	L/C	2	2001TO 2002		420059303
	421000580		593	L/C	2	2001TO 2002		420059302
	421000598		793	L/C	2	2001 TO 2002	421000598 is replaced by 421000613	420079304
	421000612		793HO	L/C	2	2003-2004	H.O. ONLY	
	421000613		793	L/C	2	2001-2003	This shortblock is assy. With a 2004 HO crank and Crankcase	
	421000614		693	L/C	2	2001-2004	ENGINES UPDATE 2004	
	421000615		593HO	L/C	2	2003-2004	H.O. ONLY	
	421000616		593	L/C	2	2001-2004	ENGINES UPDATE 2004	
	421000617		493	L/C	2	2001-2003		

ALL 2004 UPDATED SHORTBLOCKS WILL BE IDENTIFIED ON CRANKCASE 2004 MODEL

PRODUCT	REBUILT PART	PART	ENGINE TYPE	COOLING SYSTEM F/C - L/C	AMOUNT CYL.	YEAR	DESCRIPTION	Original Part #
SEA-DOO	421000071	CRANKSHAFT	587	L/C	2	1988 to 1993	Labyrinthe Seal	290886797
	421000072		587	L/C	2	1994 to 1996		290886797
	421000024		657	L/C	2	1993		290886558
	421000073		657	L/C	2	1994 & 1995		290886558
	421000074		717	L/C	2	1995 to 2003		290887867
	421000075		787	L/C	2	1995	XP 800	290888103
	421000076		787	L/C	2	1996 to 1999	Non RFI	290888103
	421000712		787	L/C	2	1998 to 2003	RFI	290887890
	421000571		947	L/C	2	2003	D.I.	290887767
	421000711		947	L/C	2	1998 to 2002	Except D.I.	290887762
	421000052	CYLINDER	587	L/C	2	1989 to 1991	Yellow	290913286
	421000053		587	L/C	2	1992 to 1996	White	290913376
	421000054		657	L/C	2	1993 & 1994	Except White XP 1994	290913386
	421000055		657	L/C	2	1994	White XP	290913388
						1995	All White X	
	421000056		717	L/C	2	1995 to 2003	Grey	290923805
	421000057		787	L/C	2	1995	USE 421 000 059	290923500
	421000059		787	L/C	2	1996 to 1999	No RFI- Grey see note 2	290923503
	421000813		787	L/C	2	1998 to 2003	RFI, Grey	290923846
	421000561		947	L/C	2	1998 to 2002	Except D.I., replace 812	290613561
	421000570		947	L/C	2	2001	D.I.	290923718
	421000205		947	L/C	2	2002-2003	D.I.	420613576
	421000093	SHORT BLOCK	587	L/C	2	1989 to 1991	Yellow	290881440
	421000094		587	L/C	2	1992 to 1996	White	290881444
	421000095		657	L/C	2	1993	XP White	290881448
						1994	SPX - XPI - GTX White	
	421000096		657X	L/C	2	1994	XP White	290881449
						1995	White SPX -GTX	
	421000097		717	L/C	2	1995 to 2003	Grey	290071703
	421000098		787	L/C	2	1995	USE 421 000 100 + 290 958 057	290881527 / 290881528
	421000100		787	L/C	2	1996 to 1999	Non RFI-Grey , SEE NOTE 1	290078704
	421000913		787	L/C	2	1998 to 2003	RFI, Grey	290078703
	421000562		947	L/C	2	1998 to 2002	Except D.I., replace 912	290094703
	421000572		947	L/C	2	2001	D.I.	290094705
	421000416		947	L/C	2	2002-2003	D.I.	420094706
SEA-DOO	421 000 582	BAL. SHAFT	947	L/C	2	1998 to 2002	BALANCING SHAFT	290837387

PRODUCT	REBUILT PART	PART	ENGINE TYPE	COOLING SYSTEM F/C - L/C	AMOUNT CYL.	YEAR	DESCRIPTION	Original Part #
ATV	421000577	CRANKSHAFT	654	L/C	1	2001	DS650	711295192
	421000157		511	L/C	1	1999-2002	Traxter	420295893

NOTE 1 : Running change from white to grey

Note: Old core will be completely refunded only if :

- Core is returned within 30 days with the filled-out rebuilt confirmation form
- Core is same model as the one shipped
- Core casting is not broken
- Core is complete and fully assembled
- Core is shipped prepaid to Bombardier
- Core is returned in original packaging to avoid freight damages

Not respecting those requirements could result in a refused or reduced core credit

LEGEND	
CR	CRANKSHAFT
CY	CYLINDER
CY N	CYLINDER (NICASIL)
REP	REPAIR ONLY
SB	SHORT BLOCK

RETURN AUTHORIZATION

PROSPEC ELECTRONICS
OF SOUTH CAROLINA
3325 HIGHWAY 17 NORTH
MOUNT PLEASANT, SC 29466
PH (843) 849-9037
FAX (843) 849-9054

All information below ***must*** be completed to be accepted.

Customer Name		
Address		
Contact		Fax
		Phone
Radio Manufacturer	Radio Model	
Hull Identification Number		
Boat Model	**Manufacturer**	**Purchase Date**
		Year
Customer Complaint		RA#
		RC# Prospect use
Store Number		

QuickFax
Service Fax Form

Mercury/Mariner/Force	MerCruiser	Service – Canada
Service – USA	Service – USA	Miss. FAX #905-270-8334
QuickFax: 800-842-4550	**QuickFax: 800-245-8794**	**QuickFax: 800-663-8334**

Please use this convenient form to request service assistance. Information bellow is required to help us respond to your request.

Number of Pages Being Faxed_____

Dealer / OEM Name_____ **Dealer / OEM #**_____

Phone No._____ **Fax No.**_____ **Contact Person**_____

Serial No._____ **Model No.**_____ **Horsepower/Liters**_____

Owner's Name_____ **Date of Purchase**_____ **Hours Used**_____

Boat Manufacturer_____ **Boat Length**_____ **Prop Size**_____ **W.O.T. RPM**____

Description of Problem (WHen does problem occur? What RPM? How often?)**:**

Tests Performed/Readings (Ignition, DVA, Pressures, Engine RPM, etc.)**:**

Suspected Cause of Problem (Disassemble if this is an Internal Engine or Lower Unit problem)**:**

List Any Repairs Already Performed and Parts Replaced:

Action Requested (Warranty/QGuard/Preauthorization, Advice, Information Only, Other)**:**

OptiMax
DDT Data Worksheet

Dealer Name:	Engine S/N:
Dealer Number:	Engine Type:
Technician Name:	ECM Part Number
Date:	DDT Software Version:

Total Run Time		
0000-0999		
1000-1499		
1500-2999		
3000-3999		
4000-4999		
5000-5999		
6000+		
RPM LIM CNT		
BREAL LN Min.		
OVER TMP Sec		
Ignition Err		
Cyl 1		
Cyl 2		
Cyl 3		
Cyl 4		
Cyl 5		
Cyl 6		
Injector Err		
Cyl 1		
Cyl 2		
Cyl 3		
Cyl 4		
Cyl 5		
Cyl 6		
Pump Err		
OIL PMP		

Sensor Err		
CTS		
CTP		
ACT		
MAP		
TPI1		
TPI2		
AIR		
TRIG		
BPSI		
Switches Err		
LOW OIL		
H_2O		
Misc. Err		
BAT		
PWR1		
PWR2		
PRLY		
LAMP		
HORN		

WOT RPM	
Propeller Type	
Propeller Size	
Boat Type	
Boat Length	
Weather Condition	

Description of Problem:

OptiMax
DDT Data Worksheet

Dealer Name:	Technician Name:
Dealer Number:	Engine S/N:

#1 Data Monitor	NOW:	Min:	Max:	Notes
ENGINE RPM				
TPI 1 VOLTS				
TPI 2 VOLTS				
BATTERY VOLTS				
PWR 1 VOLTS				
PWR 2 VOLTS				
COOL TMP STB				
COOL TMP PRT				
MAP PSI				
AIR TMP				
TRIGGER ERR				
TIME TO OIL				
OIL INJ CNT				
AIR COMP TMP				
BLOCK PSI				

#2 Data Monitor	NOW:	Min:	Max:	Notes
ENGINE RPM				
TPI 1 VOLTS				
TPI 2 VOLTS				
BATTERY VOLTS				
PWR 1 VOLTS				
PWR 2 VOLTS				
COOL TMP STB				
COOL TMP PRT				
MAP PSI				
AIR TMP				
TRIGGER ERR				
TIME TO OIL				
OIL INJ CNT				
AIR COMP TMP				
BLOCK PSI				

Bombardier Recreational Products inc.

BRP ACCIDENT / INCIDENT REPORT	DATE OF ACCIDENT / INCIDENT	Year	Month	Day

DEALER NUMBER :_____ NAME OF DEALER / DISTRIBUTOR :_____			
Contact person at dealership :			Town/City:
Date of Report:	am	pm	State/Prov.:

PLEASE REPRESENT SITUATION BY DRAWING AND IDENTIFYING VEHICLE 1 AND VEHICLE 2

VEHICLE NO. 1

Owner's Name:		Product Experience:	Hours ☐ 0-50 ☐ 50-100 ☐ 100-150 ☐ 150-200 ☐ 200+
Owner's Address:		Completed State/ Prov. Product Safety Course: ☐ Yes ☐ No ☐ N.A.	
Town/City:	State/ Prov.:	Year Taken:	Certificat No.:
Zip/ Postal Code:	Tel. No.:	Member of Product Club/ Association: ☐ Yes ☐ No	If Yes name ?
Operator's Name: (unless same as owner)		Occupation:	Employer:
Operator's Address:		**Passenger's Name:**	
Town/ City:	State/ Prov.:	Passenger's Address:	
Zip/ Postal Code:	Tel. No.:	Town/ City:	State/ Prov.:
Driver's Licence No.:	Coded Restrictions:	Zip/ Postal Code:	Tel. No.:
Years Licenced as Driver: ☐ 1-3 ☐ 3-6 ☐ 6-10 ☐ 10+		Date of Birth: Year	Month Day
Date of Birth: Year	Month Day	Age:	Sex: ☐ Male ☐ Female
Age:	Sex: ☐ Male ☐ Female	Product Experience Hours ☐ 0-50 ☐ 50-100 ☐ 100-150 ☐ 150-200 ☐ 200+	

Make:	Model:	Safety Devices Present: ☐ Yes ☐ No
Year:	Serial No.:	Safety Device in Use: ☐ Yes ☐ No
☐ Owned ☐ Borrowed ☐ Rent		Warning or Caution Statement Present: ☐ Yes ☐ No
Date of Pre-Delivery:	Date of 1st Recommended Inspection	Proper Operating Instructions Present: ☐ Yes ☐ No
Date of Recent Service:	**Mileage/Hours** :	Had Product Undergone Modification/ Recall Approved by Manufacturer? : ☐ Yes ☐ No
Dealer's Name:		Had Product Undergone Modification by Former Owner? : ☐ Yes ☐ No
Dealer's Address:		Were All Components on Product Original? : ☐ Yes ☐ No
Town/City:	State/Prov.:	If no, what was changed ?
Zip/Postal Code:	Tel. No.:	Were Replacement Components Sold by Product Manufacturer or Representative? : ☐ Yes ☐ No
Product Registration No.:	Year of Registration:	Were All Components on Any Security Item Fastened to the Product? : ☐ Yes ☐ No

Insured: ☐ Yes ☐ No		Were all scheduled maintenance procedures performed by an Authorized BRP dealer ? ☐ Yes ☐ No	
Policy No.:	Expiracy Date:	Was Routine Lubrification and Maintenance Given to the Products as Specified by the Manufacturer? ☐ Yes ☐ No	
Name of Ins. Company:			
ACTIVITY:	Unknown ☐	Transportation ☐	Racing ☐
	Recreation ☐	Work ☐	Other ☐
Witnesses' Name: (if more than one please join another page / witness)			
Witnesses' Address:			
Did the operator perform a pre-start check of the product before the accident? ☐ Yes ☐ No			
Was the operator familiar with the area being traveled? ☐ Yes ☐ No			
Did the operator complete any appropriate safety training courses relative to product (i.e. SVIA) ? ☐ Yes ☐ No If so what type ?			
Did the operator review the product safety video or DVD supplied with the vehicle ? ☐ Yes ☐ No			

VEHICLE NO. 2

Owner's Name:				Product Experience:	Hours ☐ 0-50 ☐ 50-100 ☐ 100-150 ☐ 150-200 ☐ 200+		
Owner's Address:				Completed State/ Prov. Product Safety Course: ☐ Yes ☐ No ☐ N.A.			
Town/City:	State/ Prov.:			Year Taken:		Certificat No.:	
Zip/ Postal Code:	Tel. No.:			Member of Product Club/ Association: ☐ Yes ☐ No		If yes name ?	
Operator's Name: (unless same as owner)				Occupation:		Employer:	
Operator's Address:				**Passenger's Name:**			
Town/ City:	State/ Prov.:			Passenger's Address:			
Zip/ Postal Code:	Tel. No.:			Town/ City:		State/ Prov.:	
Driver's Licence No.:	Coded Restrictions:			Zip/ Postal Code:		Tel. No.:	
Years Licenced as Driver: ☐ 1-3 ☐ 3-6 ☐ 6-10 ☐ 10+				Date of Birth:	Year	Month	Day
Date of Birth:	Year	Month	Day	Age:		Sex: ☐ Male ☐ Female	
Age:	Sex: ☐ Male ☐ Female			Product Experience : Hours ☐ 0-50 ☐ 50-100 ☐ 100-150 ☐ 150-200 ☐ 200+			
Make:	Model:			Safety Devices Present: ☐ Yes ☐ No If Yes specify			
Year:	Serial No.:			Safety Device in Use: ☐ Yes ☐ No If Yes specify			
☐ Owned ☐ Borrowed ☐ Rent				Warning or Caution Statement Present: ☐ Yes ☐ No If Yes specify			
Date of Pre-Delivery:	Date of 1st Recommended Inspection			Proper Operating Instructions Present: ☐ Yes ☐ No If Yes specify			
Date of Recent Service:	**Mileage/Hours** :			Had Product Undergone Modification/ Recall Approved by Manufacturer? : ☐ Yes ☐ No			
Dealer's Name:				Had Product Undergone Modification by Former Owner? : ☐ Yes ☐ No			
Dealer's Address:				Were All Components on Product Original? : ☐ Yes ☐ No			
Town/City:	State/Prov.:			If no, what was changed ?			
Zip/Postal Code:	Tel. No.:			Were Replacement Components Sold by Product Manufacturer or Representative? : ☐ Yes ☐ No			
Product Registration No.:	Year of Registration:			Were All Components on Any Security Item Fastened to the Product? : ☐ Yes ☐ No			
Insured: ☐ Yes ☐ No				Were all scheduled maintenance procedures performed by an Authorized BRP dealer ? ☐ Yes ☐ No			
Policy No.:	Expiracy Date:			Was Routine Lubrification and Maintenance Given to the Products as Specified by the Manufacturer? ☐ Yes ☐ No			
Name of Ins. Company:							

ACTIVITY:	Unknown ☐	Transportation ☐	Racing ☐
	Recreation ☐	Work ☐	Other ☐
Witnesses' Name: (if more than one please add a page)			
Witnesses' Address:			
Did the operator perform a pre-start check of the product before the accident?	☐ Yes ☐ No		
Was the operator familiar with the area being traveled?	☐ Yes ☐ No		
Did the operator complete any appropriate safety training courses relative to product (i.e. SVIA) ? ☐ Yes ☐ No If so what type ?			
Did the operator review the product safety video or DVD supplied with the vehicle ? ☐ Yes ☐ No			

PROPERTY DAMAGE	
Vehicle/Components:	**ESTIMATED COST OF REPAIR :**
	Vehicle : $
Environment/Private:	Property : $
	Total : $

ACCIDENT / INCIDENT DATA

Type of Terrrain

Road, Right of way ☐	River ☐	Private Trail ☐	Railroad ☐	Sea ☐	Open Field ☐	Hilly Mountains ☐
Ditch ☐	Public Trail ☐	Stream ☐	Lake ☐	Wooded ☐	Other ☐	

Type of Topography

Unknown ☐	Crest Cover ☐	Slope Up ☐	Slide Slop ☐	Straight ☐
Level ☐	Bottom of Hill ☐	Slope Down ☐	Curve ☐	Other ☐

Surface Cover (Type)			Precipitation		Visibility		Ambiant Temperature
Bare Ground ☐	Ice ☐	Complete Cover ☐	None ☐	Snow ☐	None ☐	Precipitation ☐	Actual Temperature :
Soft Snow ☐	Calm Water ☐	Partial Cover ☐	Rain ☐	Sleet ☐	Darkness ☐	Fog-Smoke-Dust ☐	_____ ☐ °C ☐ °F
Hard Pack Snow ☐	Rought Water ☐	Asphalt ☐		Hail ☐	Other ☐		
Other ☐			Other ☐				

Location of Accident:			Estimated Speed: Vehicle 1 : Vehicle 2 :
TIME OF ACCIDENT / INICIDENT:	Morning ☐	Afternoon ☐	Night ☐

INJURY DATA

Person Injured:	TYPE OF INJURY	Death	Exposure	Bruise	Burns
Address:		Fracture	Sprain	Lacerations	Internal
	PART OF BODY INJURED	Head	Back	Abdomen	Lower Limb
		Face/Neck	Chest	Upper Limp	Other

If more than one person was injured, please join another page per person

Was the person injured in ? ☐ Vehicle 1	☐ Operators	☐ Passenger	☐ Other Please specify :
☐ Vehicle 2	☐ Operators	☐ Passenger	☐ Other : Please specify :

CLOTHING:	Suit ☐	Boots/Deck Shoes ☐	Visor/Goggles ☐
Wetsuit ☐	Helmet ☐	Gloves/Mitts ☐	Life Jacket ☐

Doctor's Name:	
Doctor's Address:	
Length of Stay Hospital:	
Accident Reported to:	
Was the person injured aware that what he was doing might result in injury?	☐ Yes ☐ No
Was there anything to distract the injured person's attention from what he was doing?	☐ Yes ☐ No What?
Had anything happened to upset the person injured that day or at the time of accident ?	☐ Yes ☐ No What?
Was the person injured unusually tired or fatigued that day, or at the time of accident?	☐ Yes ☐ No
Was the person injured ejected from product?	☐ Yes ☐ No If so How ?
Was the person injured entraped by product?	☐ Yes ☐ No If so by What ?
Was the person injured in a hurry at the time of the accident?	☐ Yes ☐ No
Has the person injured or any member of his family had injury, accident or close call from this previous activity?	☐ Yes ☐ No If so What ?
Had the person injured taken any precautions to prevent an accident?	☐ Yes ☐ N If so What ?
Was the person injured familiar with the proper operation of the product?	☐ Yes ☐ No
Was the person injured informed of proper driving position/techniques before riding the product?	☐ Yes ☐ No
Was passenger wearing adequate clothing/helmet/lifejacket	☐ Yes ☐ No
How often had the person injured performed this specific activity before?	

Describe activities of person injured leading up to and at time of injury: _____

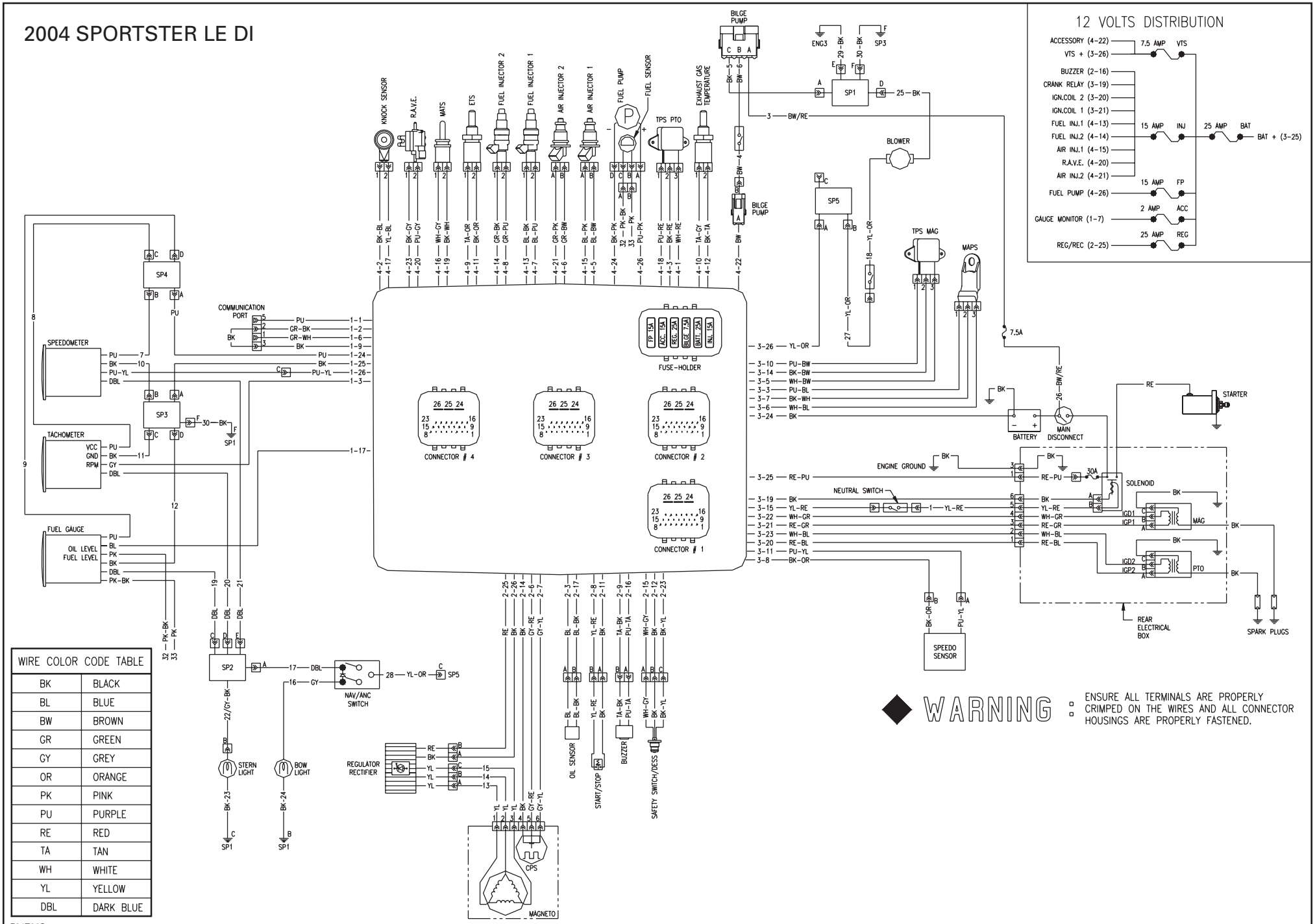
Describe physical condition of person injured at time injury (consider:, wearing glasses, handicapped or disabled, influenced by alcohol or drugs, mentally ill, chronically ill) :

Had the operating literature been read and understood by the person injured?	☐ Yes ☐ No
If no Why?	
Had victim ever been involved in another accident other than with this product? (Motorvehicle, Marine, Occupational, Recreation, Other):	☐ Yes ☐ No
If so When ?	
Was the person injured informed of proper driving position/techniques before riding the product?	☐ Yes ☐ No
Was passenger wearing adequate clothing/helmet/lifejacket	☐ Yes ☐ No

NARRATION REPORT BY PERSON INJURED	
If narration is done by someone else than the person injured, please identify yourself and sign the Narration report :	
☐ Attach Police or Fire Department reports	Include photographs of : ☐ Vehicle ☐ Scene ☐ Injuries

Signature :_____
Narration date :

2004 SPORTSTER LE DI



WIRE COLOR CODE TABLE	
BK	BLACK
BL	BLUE
BW	BROWN
GR	GREEN
GY	GREY
OR	ORANGE
PK	PINK
PU	PURPLE
RE	RED
TA	TAN
WH	WHITE
YL	YELLOW
DBL	DARK BLUE

WARNING : ENSURE ALL TERMINALS ARE PROPERLY CRIMPED ON THE WIRES AND ALL CONNECTOR HOUSINGS ARE PROPERLY FASTENED.

F04Z06S

219 700 398 CA

SEA-DOO SPORT BOATS, TECHN. UPDATE BOOK 2004 / ENGLISH
SEA-DOO BATEAUX SPORT, MISE À JOUR TECHN. 2004 / ANGLAIS

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